CHAPTER 15 Assets: Inventory and Operations Management Page 539 LEARNING OBJECTIVES After you complete this chapter, you will be able to: LO 15-1 Describe techniques to manage short-term assets. LO 15-2 Calculate the value of the assets in your business. LO 15-3 Describe techniques for managing fixed assets. LO 15-4 Calculate ratios used to analyze capital investment decisions. LO 15-5 Describe the advantages of renting or leasing capital equipment. LO 15-6 Describe techniques to manage and improve the operations of your business. LO 15-7 Be able to discuss the need for and value of documenting your business operations. • Each month, thousands of businesses experience the theft of inventory. While most inventory theft in retail stores is committed by employees, theft by outside thieves is all too common. The FBI's preliminary report on crime for 2018 states that 441,282 burglaries were committed that year in U.S. cities of 100,000 and greater population.1 There is no reliable estimate of the value of losses from freight shipments, burglaries, and fraud, but a report by The Hartford insurance company states that such losses hit 20 percent of small businesses and the average loss is approximately $8,000.2 Suppose you were to discover a burglary of your business. What would you do? Robert Kneschke/Shutterstock Focus on Small Business: Protecting Current Assets—Inventory Theft Allen and Ginger Record were dismayed when they arrived one Sunday morning in December 2018 at their small business, Fifth Avenue Studio Shop (which sells tattoo supplies). The door had been broken open and the shop had been burglarized overnight. Once they got over their instant dismay, they began the depressing task of attempting to determine just how much of what had been taken. A quick inspection showed that the criminals had not just randomly taken what was at hand. Rather, they had focused on the expensive tattoo machines and tattoo inks. Twenty thousand dollars' worth of inventory had been stolen. They also discovered that their security video had captured the entire event. The video clearly showed the door being broken down and the two burglars, wrapped in white coveralls, wearing hoodies, going directly to the most expensive items of inventory. Then, just to add insult to injury, one of the burglars obtained a copy of the surveillance video and proceeded to post it on social media. This, however, proved to be a less-than-brilliant move. The posting helped point the police to the perpetrators, who later confessed the crime. The machines, however, had been sold and are very unlikely to be recovered.3 DISCUSSION QUESTIONS Why do you think burglars would target a small business that sells highly specialized inventory? What could the owners have done to prevent this attack? How do you suppose the cyber criminals obtained the information that allowed them to target only the most valuable inventory? Think of the business that you own or would like to own. How and to what extent would a burglary be a threat to your business?

Managing Short-Term Assets 15-1 Describe techniques to manage short-term assets. In many ways, you can think of your business as a collection of assets: things you own that will provide value in the future. The things that make up your business include the obvious, such as cash, inventory, tools, machinery, buildings, and land. Less obvious things are also owned, such as legal claims to collect money from customers in the future, patents, copyrights, trademarks, expertise, and your reputation. Because your business is its assets, if you allow them to be damaged, lost, stolen, or destroyed, your wealth diminishes. At some point, if your business loses enough value, it will cease to exist. It will be bankrupt, and you will have lost your investment. Managing your business assets to obtain their maximum value is critical to ultimate business success. Chapter 13 is dedicated to the issues of managing cash, the most liquid of all business assets. This chapter discusses managing the critical short-term assets of accounts receivable and inventory, and managing the essential long-term assets of property, plant, and equipment. In the next chapter we will discuss other types of business risk that can often be managed through planning, management, and insurance. These insurable risks include risks to computer assets and critical business data; risks of damage due to events such as storms, floods, and fire; and risks of liability for the well-being of other entities. In this chapter, we first will look at the issues of maintaining the security of short-term assets (other than cash), and methods for optimizing their value in your business. In the section “Value of Assets in Your Business” we will study the issues involved in determining the value of the short-term assets at any specific point in time. Next, we will look at long-term (capital) assets, briefly discussing their nature and the methods used for planning their acquisition and disposal. Then we will expand on the capital budgeting process and take a more in depth look at the techniques of renting and leasing capital assets. Finally, we will take a very brief look at specific operations management techniques, including the process of documenting business operations.

Accounts Receivable Accounts receivable are money that is owed to your business by your customers. As was discussed in Chapter 13, relatively few small businesses today provide credit to customers. Current practice is for small businesses to provide credit only by accepting bank-issued credit cards. However, there are still some small businesses, especially those involved in wholesale distribution, that provide direct credit to customers. For these firms, managing receivables is an essential activity. The Pros and Cons of Offering Credit to Customers Have you ever wondered why any business gives credit directly to customers? On the surface the practice of giving credit seems to be a very expensive way to do business. Think about it: Selling your product and then allowing customers a month or two to pay has three negative effects that are often overlooked when

business owners make the decision to extend credit. First, providing credit delays the receipt of cash. If your small business is like most, you exist in a state of constant cash shortages. Anything that delays receiving cash makes the problems of meeting payrolls and paying suppliers and vendors even worse. Second, you must somehow replace the "missing" cash. Most often this means borrowing. Borrowing, of course, is expensive. You spend time to arrange a loan, and then must make regular payments of interest. Third, if you give credit to your customers, sooner or later one of them will not pay. Although you provide credit only to those customers whom you believe will pay, despite careful monitoring and despite strenuous collection efforts, eventually someone won't. The reasons why people don't pay can be almost anything, from inability to pay because they have no money to low ethics to outright fraud. Regardless of the cause, your business loses when customers don't pay. Page 541 So, why do it? Well, there are four big reasons that businesses provide credit to customers: Giving credit increases sales because people who buy on credit tend to buy more. Giving credit increases repeat business. Providing credit reduces the cost of selling because it is much less expensive to obtain repeat business than it is to get new customers. Even though giving credit raises some costs, the increased sales result in increased profit. So, there are good business reasons to provide credit even though doing so causes many management problems. At least the problems of extending credit are well known in business and there are good methods to maximize the potential benefit while controlling the problems. Some methods to get the best results from offering credit are discussed next. The ABC's of Extending Credit to Your Customers The first thing that you should complete before you first extend credit to any customer is a written credit policy. This documented policy replaces having individual contracts between your business and the customers to whom credit is advanced. Because it is a replacement for a unique contract, you want to ensure that each credit customer acknowledges having read the policy statement and agrees to abide by its provisions. Those provisions, at the absolute minimum, should include: Customer permission to complete a credit check and acquire a credit score. Payment terms, including the conditions that will make a payment delinquent and any provision for receiving a discount for prompt payment. Acceptable forms of payment (cash, checks, credit or debit cards, etc.). The specific address to which payments should be remitted. Penalties and interest imposed on late payments. Collection activities that will be made in the event of late payment. Recourse that your business will use in the case of nonpayment, such as the required use of arbitration or selling of the receivable to a third party. As you can see from this list, creating a credit policy is not anything to be done casually. In fact, you should work with an attorney who is expert in retail and credit operations to assist you in writing an appropriate policy. THE THOUGHTFUL ENTREPRENEUR Techniques for Day-to-Day Management of Accounts Receivable If you want to collect the money owed you from credit sales, you must be very

careful to give credit only to those customers who are likely to pay. To make credit work for your business, you must work consistently to collect what you are owed. The following nine policies are minimum standards for managing customer credit: Make an extensive credit check prior to authorizing credit sales to any individual customer. Promptly bill each customer following each credit purchase. Provide cash discounts for making timely payments. Enforce significant late fees and interest on past due accounts. Maintain constant “aging” of accounts to quickly identify customers who become delinquent. Make consistent, vigorous efforts to collect from customers, including dunning letters and phone calls. Discontinue credit sales to customers who become significantly late in paying. File suits and liens against the assets of customers who default on payment. Use your bank as a lock box for the receipt of payments. As discussed above, extending credit to customers usually will increase sales. The practice does not always increase reliable cash flow, however. To do that, you must be consistent in making collection efforts. One entrepreneur, Dwight Cooper, as described in the nearby Small Business Insight, hit upon a novel method to bring his invoices and statements to the attention of his customers. His technique has worked to speed up the receipt of payments from customers. If you do choose to provide credit, there are some common sense techniques that will help you make extending credit a value-added activity. These are listed in The Thoughtful Entrepreneur. Also, in Chapter 12, we discussed selecting and installing a computerized accounting system. Many accounting applications for small businesses include applications for managing credit to customers. You should seriously consider using the application if it is included or acquiring a separate credit management application. Use Your Accounts Receivable as a Source of Financing You can often get immediate cash from third-party finance companies if you have established and enforced policies to maintain a high quality of receivables. Having high-quality receivables lets you quickly get cash to meet unexpected needs. Page 542 You can use your receivables in two ways to quickly lay your hands on cash. First, you can pledge your receivables as collateral for a commercial loan. Pledging receivables to a commercial lender is usually less expensive than factoring. When you pledge receivables, your business is liable only for the borrowed amount and accrued interest on the loan, regardless of the amount that is subsequently collected from your customers. You have the opportunity to collect it all. On the other hand, a commercial lender will loan you only one-half of the amount that can be collected. Depending on the finance company, customer payments on pledged receivables may be collected either by you and forwarded to the lender, or may be directly collected by the lender. Second, you can sell your receivables to a finance company in a process called factoring. A factoring company will usually pay you about 75 to 80 percent of the total amount that can be collected. The factor then collects the receivables. The difference between the gross amount of the receivables and the amount that is ultimately collected is the factor’s profit margin. When you factor

receivables, you forever give up all rights to the factor's discount. Of course, for this amount the factoring company assumes your bad debt risk. If a factor does not collect enough to make a profit, it's the factor's problem, not yours. Skill Module 15.1 gives you a chance to work through the ways a factor might structure a deal for you. To be able to obtain cash for your accounts receivable, your business must meet the same standards that are needed to be able to borrow money. For example, you must have good credit established, adequate cash flow to meet expected payments, and reliable revenues from sales. Additionally, your business' accounts receivable must be well documented with the records up to date. This means that for each business to which you extend credit you will have, at a minimum, the following information: Page 544 The credit check and credit score of each creditor. Three to six months' payment history of each creditor. The repayment terms that the customer is required to meet. The time at which a payment will be deemed to be delinquent. SMALL BUSINESS INSIGHT Put Your Bill on the Top of the Pile • Dwight Cooper shaved 15 days off his company's average time for collection of bills receivable. Which of his steps could you see yourself imitating in your own business? What ideas might you add in improving your company's collection process? Courtesy Dwight Cooper Dwight Cooper, CEO of PPR Travel,4 a nurse-staffing firm in Jacksonville, Florida, was in a quandary. Average time to collect payment on accounts was a crippling 60 days from the time the bill was sent. For two months, Dwight had to cover all the costs of his nurses—wages, benefits, and tax withholdings—as well as his own operating expenses. In effect, Dwight was financing the operations of his customers. On the other hand, if he pressed his clients for payment, he risked creating bad will and perhaps even losing business. What should I do?, he asked himself. Owners of small businesses commonly face the same dilemma. A recent study by REL Consultancy Group of Purchase, New York, found that fully one-third of big businesses are habitually late paying vendors' bills.5 Sooner or later, if you provide credit to customers you too will have difficulties in collecting what is due. Customer accounts will slip ever further into arrears. Past due accounts will accumulate: 90 days, 120 days, even 6 months in arrears. Dwight took a unique approach to his problem: He asked his customers why they paid late and what he could do to help them speed payment. Even more unusually, Dwight acted to implement the things that his customers said would help them pay more quickly. First, he established procedures to ensure that every bill was accurate. Second, he issued a single invoice to each hospital for all nurses provided, rather than sending multiple invoices, one for each nurse provided. Third, he started printing his invoices on blue paper, making them immediately recognizable. Fourth, he began sending a reminder when a customer was only one day late. To take the sting from the reminders, each is addressed by hand. The result of Dwight's efforts is that average collection time has been reduced from 60 days to 45.6 SKILL MODULE 15.1 Using Receivables to Raise Immediate Cash Suppose that you need $50,000

immediately in order to purchase welded steel roof trusses for a building that you have contracted to construct. Normally you would simply purchase the materials on account from an established supplier, but two things prevent this. First, you have reached your credit limit with your supplier, and the supplier refuses to provide more. Second, your regular supplier is operating at maximum possible output and cannot deliver the trusses within the time required by your contract. You have found a supplier who will manufacture and deliver the trusses when you need them. However, this supplier does not offer credit. Further, the supplier demands an immediate deposit of one-half of the cost of the trusses, $25,000, with the remaining $25,000 paid on delivery. You have approached your bank, but the bank has refused you a loan because (1) you are at your borrowing limit; and (2) the business with which you have contracted is embroiled in a lawsuit with the bank, and the bank therefore will not accept the contract as collateral. You have current receivables of $67,000. You have contacted a factor in your area that has proposed two financing deals: The factor will purchase your receivables for 75 percent of their collection value. You will receive 95 percent of the cash immediately, and the factor will retain the remaining 5 percent until all the receivables are collected. If the entire $67,000 is collected, then the remaining money will be paid to you. However, the money being held will be reduced by any amount uncollected at the end of 120 days from the date of the factoring contract. The factor will lend you $54,000 discounted at 12 percent interest for 90 days. You must pledge 100 percent of your receivables as collateral for the loan. The factor will collect your receivables, applying 100 percent of the amount collected against the $54,000 until it is completely repaid, dollar for dollar. What should you do? Show calculations to support your decision. Your instructor can provide a suggested solution for this skill module.

Managing Inventory Inventory is a constant, everyday problem for most small businesses. It is the largest current asset that most manufacturing, wholesale, and retail firms have. Manufacturing firms, wholesalers, and retailers simply cannot operate effectively without a minimum level of inventory on hand. Even service firms such as restaurants, hair salons, automobile garages, plumbing businesses, electrical contractors, sign companies, and so on also need to have some inventory to function efficiently. It is a rare business indeed that has no inventory at all. The amount and type of inventory held for resale is important for small businesses because (1) the supply of inventory and demand of customers cannot be precisely matched at all times, and (2) holding inventory requires a nonproductive cash investment. While inventory sits on your shelves, the money required to buy it is tied up and is not making a return for you. Inventory is also a source of risk for small businesses. As the

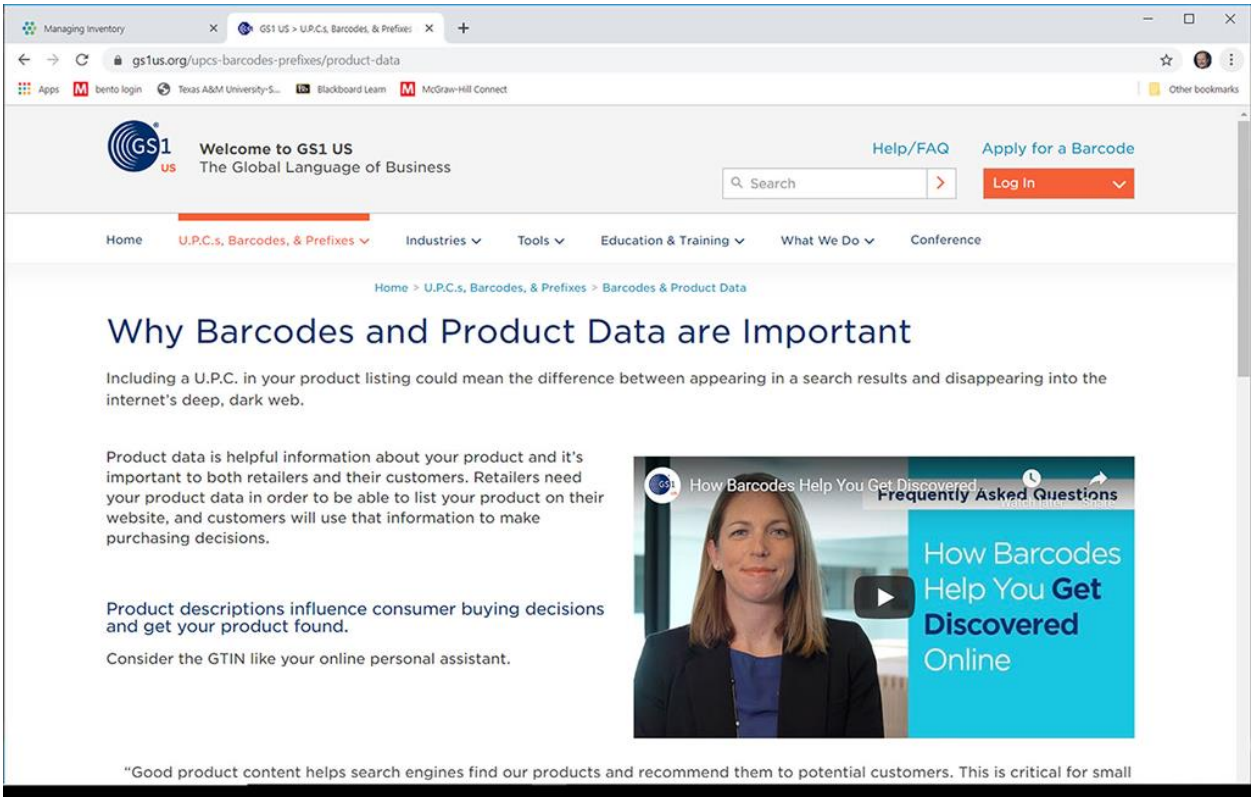
vignette that opens this chapter relates, inventory is attractive to thieves, including burglars, shop-lifters, hijackers, and even employees. In fact, employees are responsible for the majority of inventory thefts from retail and wholesale outlets. Specific details of managing the risks to inventory, including the risk of theft, are discussed in the next chapter. Determining the Appropriate Level of Inventory The right amount of inventory to keep on hand and the right amount of inventory to order at one time is determined by (1) the cost of processing an order, (2) the cost of keeping merchandise in inventory, (3) the cost of lost sales if you run out, and (4) the time it takes to receive inventory after it's ordered. These factors vary widely with the location and type of business. Small retailers and service firms that also sell products (such as a hair salon) and are located in urban areas usually have easy access to wholesalers and can make frequent small purchases. If the business is in a small town or if it needs hard-to-get resources, then it may have to keep a lot of merchandise on hand. For example, a manufacturer of fine wooden desks will need hardwood, such as mahogany, teak, or burled maple, which is produced in only a few places and for which there are only a few wholesalers, worldwide. The distribution system for hardwoods is such that, except in very large cities, you have to buy a lot of it at one time and then keep it in stock until it is used. There is a way to know how much you need to order so that you have an adequate supply of inventory on hand. It is called economic order quantity (EOQ), and it helps you think in terms of ordering costs and carrying costs. The total cost of keeping inventory is the sum of: The cost to buy the inventory. The cost to store, protect, and maintain inventory. The cost of making an order to purchase inventory.7 (See Exhibit 15.1.) EXHIBIT 15.1Inventory Costs Table Summary: Table divided into two columns summarizes factors to calculate the inventory required. The column headers are marked from left to right as: costs of carrying inventory and costs of ordering inventory. Costs of Carrying Inventory Costs of Ordering Inventory The opportunity cost of the funds invested in inventory The transaction costs of preparing and transmitting the order The cost of keeping inventory secure and in sellable condition Investigating and selecting an appropriate vendor Cost of warehouse or other storage facilities Receiving inventory Utilities Physically moving inventory into, within, and out of the storage area Security guards, fencing, access control, etc. Insurance and taxes on inventory Time required to travel to suppliers to pick up inventory Inventory shrinkage (i.e., loss from waste, spoilage, and theft) Inspecting shipments The transaction costs for counting and record keeping Record keeping If the cost of carrying inventory were the only factor in making the decision of how much inventory to obtain, it would make the most sense to purchase the smallest number of units possible at any single time. On the other hand, if ordering costs were the only consideration, you would order the largest number that you expect to sell. But if you consider both these and purchase price, as we do in Figure 15.1, you get the economic order quantity (EOQ)—the quantity at which the total cost of inventory is minimized.

FIGURE 15.1Economic Order Quantity Graph Page 545 You do not have to derive the EOQ equation to use it. You can simply substitute your business's projected annual sales demand, cost of placing one order, and cost of holding one unit in inventory to calculate your unique optimum order quantity and the number of orders that you should place each year. If you are interested, Appendix A of this chapter provides a detailed explanation of how the EOC equation can be used. Scheduling Ordering and Receipt of Inventory Determining the right quantity to order is only part of the problem of inventory management. You also need to know when to place each order. The EOQ tells us only how many units to order and how many orders to make. It does not tell us when to place each order. Deciding when to place an order is determined by (1) the rate of sales and (2) the time required to receive new stock. Page 546 The optimum stocking level (also called reorder point) is the amount of inventory that results in the minimum cost, considering (1) the cost of lost sales resulting from running out of stock, (2) the number of units sold per day, and (3) the number of days required to receive inventory. If everything worked perfectly, you would receive new inventory just as you sold the last unit from the prior order. But in business, as in most things in life, things are never perfect. Delivery times vary. Sales volumes are not constant. Sometimes demand exceeds your estimate. Sometimes your estimate exceeds demand. If you know how demand for a particular product or part changes, you can calculate the probability of being out of stock, given any initial level of inventory and time between receipts of inventory. Computing the reorder point tells you the minimum stock level at which you would place an order. Ordering at that time would ensure that you do not run out of inventory before you run out of customers, and at the same time would minimize your holding unnecessary amounts of stock. In practice, managers of small businesses rarely attempt such statistical analyses. Rather, they use a heuristic (rule of thumb) developed from experience. Unless you are selling a product that has very high unit costs, such as automobiles, tractors, or airplanes, the effect of having too little inventory is worse than the effect of having too much. For this reason, most businesses deliberately time the placement of orders to keep some extra amount of inventory on hand as safety stock to provide for the possibility that sales might be greater than forecast, or that deliveries might be delayed. One interesting use of optimum stocking levels comes when an entrepreneur starts to use it as a sales tool directed toward customers. If you compute customers' reorder point, you have an added reason to contact them to find out whether it is time for them to reorder your product.8 Just-in-Time Inventory Systems The cost of owning and holding inventory is far greater than the cost of ordering inventory. As a result, most businesses try to acquire and keep on hand the minimum amount of inventory possible while still being able to meet customer needs. At the extreme, a few businesses hold no inventory at all. Rather, these businesses order and receive inventory only after a customer purchase has been made. The practice of acquiring

inventory only in response to a completed sale is called a pull-through system. Once a customer sale is made, an order is placed to either obtain or produce the product. Each stage of the production process operates in response to this order, ultimately reaching back to the acquisition of the raw materials from which the product is made. The ultimate extension of pull-through processing is just-in-time (JIT) inventory management. A just-in-time inventory system attempts to reduce inventory levels to the absolute minimum by (1) accepting inventory only as it is sold, (2) assembling product in the absolute minimum time possible, and (3) shipping product to the customer immediately upon completion. In this way, the three primary inventories of manufacturing, (1) raw materials, (2) work in process, and (3) finished goods, are all kept at the minimum levels possible. • Alienware, a subsidiary of Dell Inc., uses just-in-time inventory management to keep costs of its high-end PCs at a reasonable level. Official Windows Magazine/Getty Images One of the best-known examples of just-in-time manufacturing is Dell Computers.9 Other small businesses use the approach too. Consider Alienware (now a subsidiary of Dell), a maker of high-end PCs for game enthusiasts. Alienware was started by two lifelong friends, Alex Aguila and Nelson Gonzalez, in Miami, Florida. Their model was simple: “First you pay. Then we build.” Having started with only $13,000, they could not afford to spend a lot on inventory. When Alienware received a computer order from its website, a work order was generated that specified each individual component to be assembled. Alienware maintained a just-in-time delivery system for needed parts, and leveraged its relations with suppliers to ensure speedy delivery. With the parts collected, the computer is assembled, tested, and then sent to the packing and shipping department. The use of the JIT approach originally meant that Alienware had no receivables to underwrite, no inventory to depreciate, and no bad debt.10 Today, Dell, the current owner of Alienware, still gets the same benefits and lowered costs pioneered by Aguila and Gonzalez. Page 547 Adoption of JIT inventory management requires an extreme degree of cooperation with your vendors. The location, scheduling, and transportation of inventory must be as carefully choreographed as is a Broadway dance routine. A single misstep in process can result in the shutdown of production and in lost sales. To ensure against this, most businesses that adopt JIT compromise between the theoretical “best way” and the exigencies of real-world business management and maintain some level of safety stock. The development and growth of the eBay online auction service has provided many small businesses with the ability to practice just-in-time inventory management. Buyers on eBay know that there will be a period of a few days between winning a bid and receiving the product. Numerous eBay sellers use this time to obtain the product. Often, it is shipped directly from the wholesaler to the buyer. This practice is the ultimate just-in-time process: The eBay seller never owns or handles the products being sold. It is called microinventory and is a special form of JIT found in Internet-based businesses11 such as Alienware. Other Approaches to Inventory

Control There are three approaches to maintaining records of inventory that are very common in small businesses: (1) periodic inventory, (2) perpetual inventory, and (3) point-of-sale systems. Any one of these, applied conscientiously, can help control inventory and inventory costs. Periodic inventory is the process of physically counting business assets on a set schedule. The time between counts is usually one business year, although periodic inventories may be conducted twice per year, quarterly, monthly, or as often as your business needs require. Most small businesses use the periodic inventory method because it is relatively inexpensive and meets the requirements of both local and federal taxing agencies. Perpetual inventory is a system of recording the receipt and sale of each item as the receipt and sale occur. A perpetual inventory system maintains a constant record of the amounts and value of inventory that has been sold and the amounts and value of inventory on hand. Perpetual inventory systems provide you with instant access to accurate inventory records, thus greatly easing the problems of managing inventory levels. The main drawback to using perpetual inventory systems is the high cost in time needed for constant record keeping. Keeping perpetual inventory in a manual system usually is accomplished by maintaining a separate record, often called a stock card, for each different type of inventory. Then as inventory is received and sold, the card is updated. (See Figure 15.2.) FIGURE 15.2The Stock Card Bar coding is one method used to reduce the cost of perpetual inventory systems. Bar codes are computer-readable tags that are unique to each item of inventory. The most common bar codes (those that are used every time your retail purchases are scanned at the register) are called universal product codes (UPCs) in the United States and EANs (European Article Numbers, now called International Article Numbers) elsewhere. The system is administered by a not-for-profit standards organization, GS1, which has a presence in all large countries—for example, GS1 US (www.gs1us.org). Manufacturers pay an annual fee to participate. Each member of the system licenses a “company prefix,” a variable-length code unique to that company. To that prefix, the member then adds on a unique code for each product, creating a number that includes all but one digit of the UPC or EAN. A GS1-provided tool creates a final “check digit,” which ensures that the number scans correctly. Each UPC or EAN is therefore unique to the product for which it is issued. As a member of GS1, you have access to the database of all codes and the corresponding manufacturer information. The company maintains an extensive website that explains the system, the use of bar codes, and information necessary to join. You may also create private bar codes of any number of digits for your internal use. Because the private codes are for your internal use, they do not have to be registered with GS1 US. To use bar codes effectively in your business, you need (1) a method to create bar codes, (2) a means to print the codes on the items that you wish to track, (3) a scanner that can read the codes, and (4) a computer software program that can interpret the codes and update a database of information associated with each code.

There are hundreds, if not thousands, of businesses that provide all the elements necessary for you to use bar codes internally in your business. A search of the Internet's open directory (DMOZ) for the term "bar codes" returned 229 individual listings for firms that provide bar code software and hardware. Page 549 Point-of-sale (POS) systems comprise both hardware and software that integrate inventory management directly into your accounting system. You are very familiar with POS, whether or not you are aware of it. The familiar supermarket scanner and the multibutton registers at fast-food restaurants are examples of POS systems. In these systems, every sale is immediately recorded in the accounting system. Revenue is increased and inventory is decreased simultaneously. Point-of-sale systems have recently become inexpensive enough to be used by small businesses. Today, you may acquire complete systems, including a cash drawer, credit card scanner, bar code scanner, computer, monitor, and software for less than $2,000. There are numerous providers of POS systems, including such well-known companies as Intuit, Hewlett-Packard, Sony, and Panasonic. • If it is important to you that your product be recognized universally, be sure to apply with GS1 US to receive your product's UPC. GS1 US, https://www.gs1us.org/upcs-barcodes-prefixes/product-data


Managing Inventory
GS1 US > U.P.C.s, Barcodes, & Prefixes
gs1us.org/upcs-barcodes-prefixes/product-data
Welcome to GS1 US
The Global Language of Business
Help/FAQ
Apply for a Barcode
Search
Log In
Home
U.P.C.s, Barcodes, & Prefixes
Industries
Tools
Education & Training
What We Do
Conference
Home > U.P.C.s, Barcodes, & Prefixes > Barcodes & Product Data
Why Barcodes and Product Data are Important
Including a U.P.C. in your product listing could mean the difference between appearing in a search results and disappearing into the internet's deep, dark web.
Product data is helpful information about your product and it's important to both retailers and their customers. Retailers need your product data in order to be able to list your product on their website, and customers will use that information to make purchasing decisions.
Product descriptions influence consumer buying decisions and get your product found.
Consider the GTIN like your online personal assistant.
How Barcodes Help You Get Discovered
Frequently Asked Questions
How Barcodes Help You Get Discovered Online
"Good product content helps search engines find our products and recommend them to potential customers. This is critical for small

Bicycle Buddy Supply, Inc.

STOCK CARD

Supplier Number GM 66062

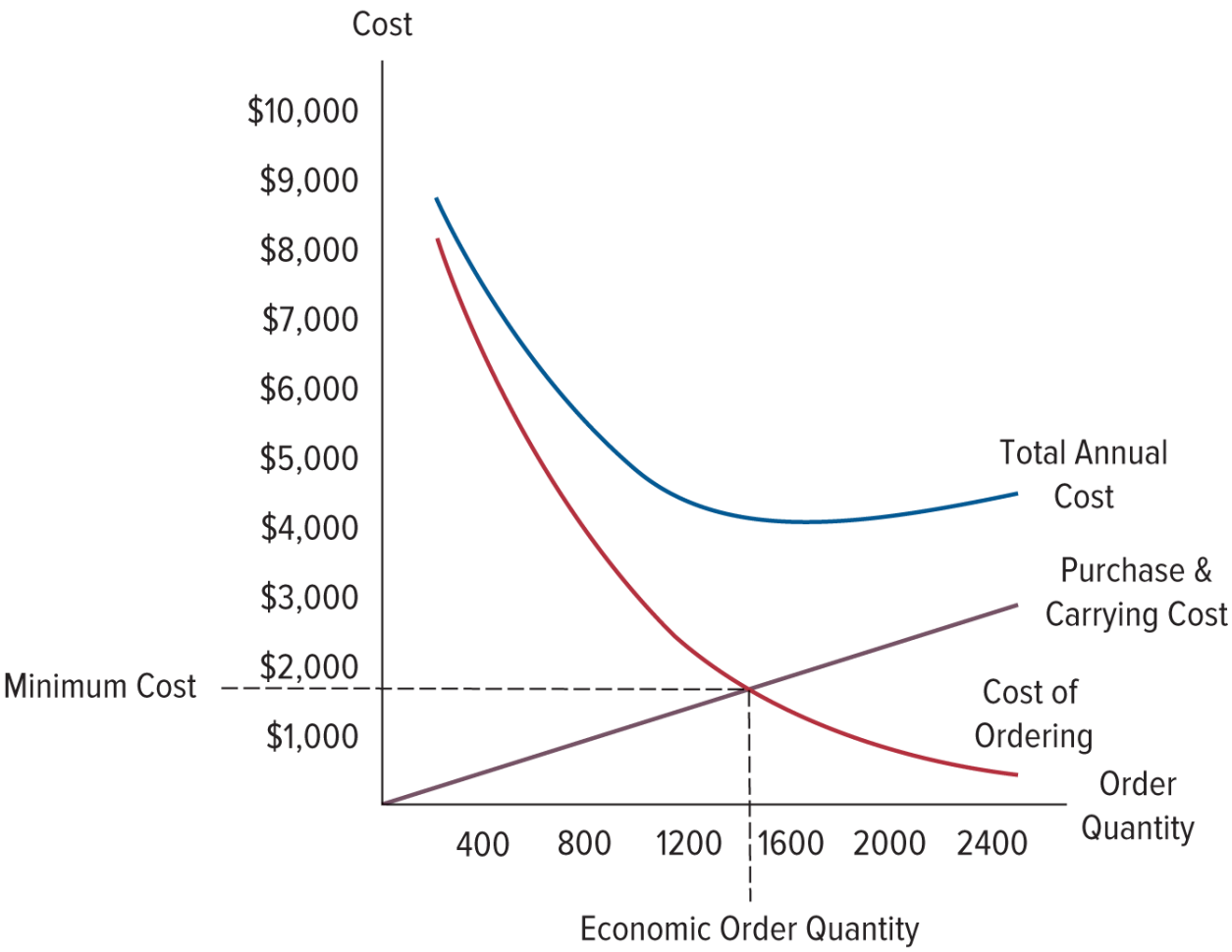
Supplier Name Garmin, Ltd.

Fiscal Period Fy 2020

Verified By _____ Date _____

Item Key	Transaction Date	Inventory Code	Item Name	UPC	Location	Purchase Price	Sales Price	Units Received	Units Sold	Number On Hand	Remarks
20747	12/05/2020	AC10033	GPS Trip Computer	753759142	Bin A3 R5 S3	150.00		100		100	
20748	12/06/2020						300.00		20	80	

Stock Control	
Maximum Qty	
Minimum Qty	
Reorder Level	



Value of Assets in Your Business 15-2 Calculate the value of the assets in your business. There are two fundamental kinds of assets in a business—short-term, which includes inventory and accounts receivable, and operating or capital assets. It is necessary for you, as the owner of a small business, to know what the value of these assets is. The value of the business assets your business owns is an important part of the evaluation made by bankers and investors when they are considering making a loan to or investing in your business. The methods for determining the value of each are discussed in the next section. Many small businesses need little in the way of capital assets. However, transportation, manufacturing, automobile repair, mining, ranching, and farming businesses all require the use of substantial capital assets in the form of land, buildings, and machinery. The value of such businesses is largely determined by the value of the physical capital assets that they own. The value to your business of the assets that are used in operations usually far exceeds the value that might be realized if you were to sell them. An example of such an

asset is fencing for a ranch or farm. A five-strand barbed-wire fence on steel posts can easily cost $8,000 per mile.12 However, no rancher can ever realize the value of the fence by selling it. At least half the cost of fencing is in the labor required to install it. Once installed, it would cost a similar amount to uninstall. Used barbed wire and posts will bring only a fraction of their cost new. In fact, farmers and ranchers often cannot even give away old fencing; rather, they incur significant costs to safely dispose of it. Similar situations exist in other businesses such as manufacturing, in which equipment, especially custom-made machinery, is much more valuable as an operating asset than can ever be realized from disposal. Even restaurant equipment such as deep fryers, cooking grills, and ventilation hoods have a much greater value being used in a restaurant than they do sitting in a restaurant supply store. Determining the Value of Your Operating Assets Page 550 The value of operating assets is a function of their utility. In other words, your assets are worth the sum of the future benefits that the assets will produce. It is this definition that is the source of the discounted cash flow methods discussed in Appendix B of this chapter. Discounted cash flow valuation methods define utility as being the net cash inflows that the asset will produce. The value of the asset is the sum of these cash flows discounted for time and cost of capital. Just as estimating future cash flows is highly problematic for small businesses, predicting future utility of capital assets is so uncertain that it is largely a waste of time. Therefore, most small businesses determine the value of capital assets using some combination of the four common accounting methods of assigning asset value. The four accounting methods to value capital assets are (1) book value, (2) disposal value, (3) replacement value, and (4) fair market value. Book value is an accounting term that describes the difference between the original acquisition cost of capital assets and the amount of depreciation expense that has been recognized for them. Even a superficial consideration of book value discloses that it is simply an accident if book value even approximates the asset's economic value. This is true for two reasons: (1) Purchase price is not an indicator of the current value of any asset, and (2) depreciation is not, nor is it intended to be, any measure of the consumption through use of an asset's value. Depreciation is an arbitrary, but regular and systematic, method used to take asset value as an expense for the purpose of calculating net income or loss. Depreciation is based on three assumptions: (1) that the asset has a fixed, determinable period of utility (called useful life); (2) that the asset has a fixed, determinable value that will exist when the depreciation process is complete (called salvage value); and (3) that the value of the asset will decline in a continuous and predictable manner over the period of utility (e.g., straight line, declining balance, etc.). In fact, none of these assumptions necessarily holds for any capital asset. Thus, depreciation is arbitrary. Book value is generally considered to be not very useful for any purpose other than accounting and income taxes, each of which, through law, regulation, and practice, require its use. Disposal value is a method of

estimating asset value by calculating the net amount that you would realize were you to sell the asset in an arm's-length transaction. This is accomplished by subtracting from the estimated sale price the estimated costs of selling, disassembly, shipping, indeed, all costs necessary to dispose of the asset. Disposal value is the residual of many estimates. At best, you must consider the value to be a rough approximation. At worst, the value may hold no relationship to the asset's unknown, "true" economic value. Replacement value can be determined with much greater confidence than can be given to either book value or disposal value. In effect, you are estimating the value of a currently owned capital asset by determining the cost that would be incurred to replace it with an identical asset. Unlike disposal value, in which you must estimate an essentially unknowable selling price for a used asset, replacement value is based on determining the price of either a new asset or a used asset for which there is an organized market. For many assets, such as machine tools and vehicles, this is done quite easily by obtaining quotes from dealers. Custom-made assets require a bit more work but still can be accurately priced through an engineering approach. The primary advantage of replacement value is that you can be quite confident of its accuracy. The disadvantage is that the price of a new asset is often much greater than the price of an essentially identical asset already in your business. Fair market value lies somewhere between disposal value and replacement value. Fair market value is an attempt to determine the price that the asset would bring, in its current location and condition, in an arm's length transaction between a willing buyer and a willing seller. In contrast to disposal value, fair market value is assigned from the point of view of the buyer, and thus includes the selling price and all costs to install, test, and prepare the asset for productive use. The appropriate valuation method is largely determined by the purpose for which the valuation is being made. As stated, laws, regulations, and GAAP require that book value be used for financial reporting and income tax purposes. For any other purpose, you may use the valuation method that best meets your needs. If you are offering assets as collateral, lenders are most interested in disposal value, as that best approximates the amount that would be realized if the asset were repossessed. If you are considering an investment opportunity, disposal value provides an estimate of the timing and amounts of cash flows that can be used for net present value and internal rate of return calculations. If you are offering your business for sale, as the seller of a business you would view disposal value as a "lower limit" for the selling price because it approximates the amount that would be realized were the business to be liquidated. On the other hand, potential buyers and investors are most interested in replacement value. Replacement value sets an "upper level" for the value of your business assets as an approximation of the cost that would be incurred to equip a start-up business. Page 551 Determining the Value of Inventory If your business holds inventory for sale, you are faced with the problem of determining its value. The value that you assign to inventory sold and on hand affects (1) the amount of profit that

you recognize and (2) the value of your business. Inventory valuation begins with knowing how much of what you are holding. All too often owners of small businesses purchase inventory items which are stored out of sight. These items somehow never get used or sold. Over time such “forgotten” items accumulate, tying up scarce funds. At the minimum, you should conduct a physical inventory—a type of periodic inventory—at least once each year identifying and counting all items that your business owns. Items that have not been sold or used for significant periods of time should be disposed of to free up their value for productive use. Slow-moving and dated inventory may be disposed of by discounting or “dumping” it to overstock resellers such as Big Lots, Dollar Stores, or junk dealers. SMALL BUSINESS INSIGHT James P. Smith of Signgraphics, Inc. • Signgraphics had to make a tough call on selling its extra sign faces inventory to a competitor. Having an inventory handling approach that allows for quick and easy adaptation is key to successfully managing your small business. What are some ways you think owners can build flexibility into their inventory management procedures? Dennis MacDonald/PhotoEdit James P. Smith, owner of Signgraphics, Inc., of Blue Springs, Missouri, had just learned that a contract to produce signs for a chain of convenience stores had been lost to a competitor. As a result, Signgraphics was now stuck with twenty 8 ft. x 12 ft. polycarbonate plastic sign faces. The faces could not be used for any other purpose because they were vacuum molded and internally painted with the logo and name of the store chain. Each sign face, molded and painted, cost over $1,300. That meant Signgraphics had $26,000 of scrap. Signgraphics, as would most small businesses, would be severely damaged by such a loss. Something had to be done, and done quickly. Biting the bullet, James called the competitor who had just won the contract. The competitor quickly agreed to purchase the faces for $22,000. Although still a painful loss, $4,000 was not great enough to threaten the survival of the business. In fact, Signgraphics continued to be successful for an additional four years until the business was sold to yet another competitor in the area. Sooner or later you are likely to be stuck with surplus, slow-moving, or obsolete inventory. If you are like most entrepreneurs, you’ll be tempted to keep the inventory “just in case you find a use for it.” Over time such surplus inventory can build up to astonishing levels, tying up money that could and should be used in the business. A better strategy is to constantly monitor the use of inventory and quickly dispose of any “dated” items before they become obsolete or otherwise unsellable. Such inventory items may, as in the case of Signgraphics, find a ready buyer in a competitor. If you are a wholesaler or retailer, you can offer steep discounts to existing customers. You may sell to a company that specializes in buying surplus and distressed items. Finally, as a last resort you may scrap such inventory and take its acquisition cost as a business deduction against profits. Page 552 Once you know what inventory you have, you can then assign it a value. One of the unpleasant surprises that many small business owners experience is the discovery that inventory is often worth

far less than it cost to acquire. Inventory loses value in many ways. It can lose value because of changes in fashion or changes in technology. Some inventory items, especially food items, spoil with the passage of time. Some things get broken, dented, scratched, dirty, or otherwise shopworn. Determining the value of items being held for sale is essential to efficient inventory management. As the Small Business Insight above relates, it is rare that inventory has no recoverable value, at all. If you use a bit of ingenuity, you can usually find some way to realize value from even custom-made items, like the sign faces Jim Smith had on hand when he lost his contract with a customer. The value of inventory items held in stock is highly problematic, especially when prices are rapidly changing. You must answer the questions, "Is inventory worth what I paid for it? Is it worth what I must pay to replace it? Or is it worth only the amount for which I can sell it?" Any of these methods, acquisition cost, replacement cost, or fair market value, respectively, can reasonably be used to determine the value of your inventory. However, your choice of valuation method affects the profit you recognize and thus the amount of taxes you must pay. If you assign a high value to inventory, you increase the amount that you deduct for cost of goods sold which results in decreased sales margin and reported profit. Less reported profit means less will be paid in income taxes. However, lowered reported profits makes your business worth less to investors, lenders, and potential buyers. On the other hand, if you assign the lowest acceptable value to inventory, you will make the results of operations of your business look better, but at the price of paying increased income taxes.

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Property, Plant, and Equipment 15-3 Describe techniques for managing fixed assets. The importance of the issues of the acquisition and maintenance of real estate, buildings, and machinery varies among businesses. If your business is wholesale or retail merchandising, the issues of property, plant, and equipment, referred to as PPE, are most likely of relatively minor importance to your success. If your business is manufacturing, mining, farming, ranching, or transportation, your greatest investments and your greatest costs are consumed by land, buildings, and machinery. Obtaining, maintaining, and efficiently using these expensive capital assets is critical to your success. All capital assets cause you to incur four costs over time: (1) the cost of acquiring the asset, (2) the cost of owning the asset, (3) the cost of operating the asset, and (4) the cost of disposing of the asset. It is common for owners of small businesses to consider only the first of these costs in making an investment decision. This narrow focus on acquiring an asset is unfortunate because although you make such decisions infrequently, the ramifications of the decisions are critical to your success. Making a correct decision will increase the value of your business, and thus your wealth. Making an inappropriate decision will lead to suboptimal returns, even to your business going bankrupt. The probability of making a good capital investment decision is greatly increased when all the costs of the asset, called whole of life costs, are included in the decision process. In Skill Module 15.2 you will analyze the whole of life costs for one asset. SKILL MODULE 15.2 Understanding Whole of Life Costs for Capital Budgeting You are the owner of the Real Wood Furniture Company. Business has grown to the point that a bottleneck has formed where the 4 ft. x 12 ft. lumber-core plywood sheets are cut to finish size. You have identified two automated panel saws that have identical capacity sufficient not only to eliminate the bottleneck, but also to be able to keep up with projected growth for the next 10 years. Table Summary: Table divided into three columns shows data required to calculate cost for disposing off the furniture after 10 years. Column 1 notes the account heads. Columns 2 to 3 are marked as: Milwaukee and Delta. Real Wood Furniture Co. Manufacturers of Fine Wood Desks Data concerning Automatic Panel Saw Milwaukee Delta Purchase price $110,000 $80,000 Shipping 3,500 1,000 Installation 6,500 4,000 Testing 3,500 4,500 Total acquisition cost $123,500 $89,500 Maintenance cost per year $12,000 $ 14,900 Energy costs per year 8,500 13,000 Rebuilding in seventh year 25,000 35,000 Disposal cost end of tenth year 4,850 6,000 Each machine has a useful life of 10 years. However, each will have to be rebuilt at the end of the seventh year to get the final three years of use. At the end of 10 years either machine will be technologically obsolete, thus you will have to dispose of it at that time. Estimated cost data for each saw are shown in the chart. Examine the data in the chart. Without doing any specific mathematical analysis, state which saw you would purchase, and why. Assume that every desk to be produced for the next 10 years will be made from wood that is cut by the saw that is purchased. Sales for the year the saw is purchased are projected at $260,000 and

are expected to increase by 15 percent per year for the next 10 years. Use Real Wood Furniture Co.'s cost of capital to perform a discounted cash flow analysis of purchasing each saw. Now which saw would you choose, and why? Advanced topic: Assume that Real Wood Furniture Co. is profitable and will pay 30 percent income taxes each year of the life of the saw purchased. Repeat the discounted cash flow analysis, only this time make adjustments for the effect of income taxes. Now which saw would you choose, and why? Your instructor may provide a suggested solution to this skill module. Acquisition cost of a capital asset is the sum of everything that you spend to acquire and prepare the asset for its first productive use. Thus, the cost of engineering to specify the details of the asset, purchase price, shipping, insurance during shipping, setup, testing, and interest on any borrowed funds are all accumulated to determine the cost of the asset. Costs of owning an asset include interest on funds borrowed and the opportunity costs of funds invested to acquire it. Costs of ownership also include insurance on the asset, property taxes, value of the space that the asset occupies, and the cost of record keeping and security for the asset. Costs of operating the asset include the energy the asset consumes, maintenance, loss of economic value resulting from wear and obsolescence, and any necessary training of operators. Page 553 Costs of disposition are composed of the value of the activities necessary to get rid of the asset. Such costs include meeting environmental regulations, disassembly, advertising, commissions, shipping, insurance, and fees. The cost of meeting environmental requirements can be huge for some assets. For example, it is nearly impossible to find affordable means to dispose of radioactive tools, anything that contains mercury or lead (e.g., computer monitors), electric motors and transformers that contain polychlorinated biphenyls (PCBs),13 and personal computers that contain significant quantities of several poisonous heavy metals.14

The Capital Budgeting Decision 15-4 Calculate ratios used to analyze capital investment decisions. Eventually small businesses get to the point where they can begin to make investment choices—do you open a new location or expand the one you have? Do you buy new machinery or invest in real estate? The process of deciding among various investment opportunities to create a specific spending plan is called capital budgeting. The goal of capital budgeting is to improve the quality of decisions about how to best use the scarce resources of the business. Capital budgeting works by determining the costs and benefits of each alternative investment, such as machinery or real estate. The question that must be answered to make a decision is, "Which of the available investment alternatives provides the greatest benefit relative to the cost of the investment?" Page 554 To do this, the alternatives are simultaneously compared by examining various financial ratios or by applying the concepts of the time value of money. The time value of money is the concept

that a dollar received today is worth much more than is a dollar to be received at some time in the future. The two most commonly used financial ratios for comparing investment alternatives are (1) payback period and (2) return on investment (ROI). There are also two significantly more complex approaches called net present value (NPV) and internal rate of return (IRR), which are discussed in Appendix B at the end of this chapter. Each of these measures has both advantages and disadvantages. Not one of them is appropriate in all circumstances, although each can be useful in the capital budgeting process. To illustrate each of these investment analysis tools, consider the following: The owner of a sign shop has the opportunity to contract with a rapidly growing franchise operator to install signs at all new locations. To be able to complete this contract, she will need to invest in a heavy truck and a truck-mounted crane. She has reduced the decision alternatives to two different truck–crane combinations: a Skyhook 85-foot heavy-duty crane with a service ladder mounted on a Ford diesel truck and a Sponco 87-foot medium-duty crane with a service bucket and remote controls mounted on a GMC diesel truck. The cost of the Ford–Skyhook combination, ready for use, will be $150,000. The cost of the GMC–Sponco combination will be $185,000. Each truck and crane will have a useful life of 10 years. Each crane has certain advantages and disadvantages. The Skyhook crane can lift 2,000 pounds to its full extension height. However, it does not have remote controls, and thus requires a crew of two people. The Sponco can lift only a 950-pound load, but its service bucket with remote controls allows it to be used by a single operator as a “cherry picker” to lift the operator into position, obviating the need (and dangers) of working from a ladder. Based on these facts, the owner has estimated future cash flows that will be provided by each alternative. The owner has determined the following criteria to aid in making a decision: The business’s weighted average cost of capital is 20 percent. The maximum acceptable payback period is four years. Depreciation is recognized using a straight line for a useful life of 10 years. Salvage value of each combination will be $0 (zero). Cash flows and profits will differ by the tax effect of depreciation recognized.15 Depreciation for the Ford–Skyhook is $15,000 a year, for the GMC–Sponco $18,500 a year. Payback Period The payback period measure is a statement of how much time must pass before your business receives back the same number of dollars in cash flow as you must pay out to obtain a capital asset. Only cash flows are considered. Two decision rules are applied in choosing from among alternative investments: Accept only those alternatives for which the time required to recoup the original investment is equal to or less than a maximum allowable time determined by management. Accept the alternative with the shortest payback period among those that meet the first criterion. Consider the following example: Using the data in Table 15.1, we can calculate that the Ford–Skyhook combination pays back in 2 years and 11 months. In the first year, $35,000 is paid back. Another $60,000 is received in year 2, leaving $55,000 to be recovered. If we assume that the money is received evenly across the

year, then it will take 55,000/60,000, or 0.917, of one year to recoup the final $55,000. TABLE 15.1 Data for Capital Budgeting DecisionsTable Summary: Table divided into three columns compares yearly money received by two companies based on cash flow and project. Column 1 notes the years. Columns 2 to 3 are marked as: Ford–Skyhook and GMC–Sponco, each of which is further divided into two sub-groups as: cash flows and accounting profits. Estimated Cash Flows and Accounting Profits of Each Alternative Ford–Skyhook GMC–Sponco Years Cash Flows Accounting Profits Cash Flows Accounting Profits 0 $(150,000) $(185,000) 1 35,000 20,000 45,000 26,500 2 60,000 45,000 62,500 44,000 3 60,000 45,000 62,500 44,000 4 65,000 50,000 67,500 49,000 5 70,000 55,000 77,500 59,000 6 75,000 60,000 87,500 69,000 7 75,000 60,000 92,500 74,000 8 80,000 65,000 95,000 76,500 9 80,000 65,000 95,000 76,500 10 80,000 65,000 100,000 81,500 Using the same method, we find that the GMC–Sponco combination will require 3 years and 2.7 months to pay back its initial investment. Following the decision rules, we find that both alternatives meet the minimum hurdle of paying back in four or less years. However, the Ford–Skyhook alternative payback period is 3.7 months shorter, thus we would choose this alternative. Page 555 The main advantage to using the payback period analysis is its simplicity. Also, it allows easy comparison of alternatives that are dissimilar in magnitude of cash flows and overall project life. The primary disadvantages of the payback method are that (1) it disregards the time value of money and (2) it disregards all cash flows that occur after the payback period. These disadvantages often result in managers making suboptimal investment decisions. Rate of Return on Investment Rate of return on investment (ROI) is a measure of the relationship between the initial investment and the profits that are expected to be received from making the investment. The calculation is straightforward: ROI = (Average annual profits)/(Average investment) As with the payback method, two decision rules are applied to choose from among alternative investments: Accept only those alternatives for which the return on investment is equal to or greater than the business's weighted average cost of capital, which is the expected average future cost of funds and is discussed in Chapter 14. Accept the alternative with higher ROI among those that meet the first criterion. We can then calculate the ROI of each alternative: Ford–Skyhook GMC–Sponco + , , + . , , + . Both alternatives meet the first decision rule as the ROI of each exceeds the business's weighted average cost of capital of 20 percent. We accept the Ford–Skyhook alternative because it has the greater ROI of the two. Page 556 Return on investment analysis has two advantages: (1) It is easy to calculate, and (2) it relies on accounting information with which business owners, lenders, and investors are comfortable. ROI's disadvantages are (1) profits are not the same as cash, and (2) the method ignores the time value of money. Net Present Value Calculation of net present value (NPV) and its application to this investment decision is explained in Appendix B at the end of this chapter.

Rent or Buy 15-5 Describe the advantages of renting or leasing capital equipment. It is often not necessary, or even advisable, to purchase capital assets. Many capital assets for which there is an active market, such as real estate, trucks, tractors, and airplanes, can easily be obtained through rental or lease agreements. Renting and leasing are similar, but not identical processes. In each, ownership of the asset remains with the entity from which the asset is rented or leased. The primary difference is that renting is usually a short-term obligation, perhaps as short as one hour, while leasing is usually for a period of a year, or more. Also, unlike a rental agreement, leases may provide for the lessor to take ownership of the asset at the end of the lease term. Advantages and Drawbacks of Renting Renting such assets provides several important advantages. First, renting requires little or no cash investment on your part. Purchasing, however, often requires that your business be able to pay cash of 20 percent or more of the purchase price in order to be able to borrow funds to finance your purchase. Second, renting usually does not require an extensive (and expensive) application process as does borrowing money. Third, renting usually protects you from unexpected costs of repairs. If you are renting a truck for your business and it breaks down, you can quickly obtain a replacement vehicle. Fourth, renting capital equipment provides an easy method to avoid ongoing costs if business conditions change. If a sudden loss of business makes the asset uneconomical, you can return it to its owner, thereby avoiding the costs of ownership, operation, and disposal. Making the decision to rent rather than to buy an asset provides a partial answer to the problem of projecting future cash flows. You may make the same analysis that you would in order to decide to buy. However, in making this analysis, renting provides two advantages over buying: (1) The exact amount and timing of cash outflows is specified in the rental contract, and (2) renting provides a fall-back position should your projections prove to be incorrect. If actual cash flows fall short of your projections, you may be able to return the rented property, avoiding future rent payments. If you still wish to pursue the opportunity despite lower cash flows than expected, you can make provisions for a less expensive alternative. Should actual cash flows exceed your projections, you have the options of either purchasing the rented asset or returning the asset and purchasing a higher-capacity replacement. The disadvantages to rental are, first, you do not have an ownership position. The value of a rented asset does not ever show up on your business's balance sheet. Should you need capital, rented assets cannot be used as collateral to obtain borrowed funds. Second, rental requires that you make regular, timely payments. If you own an asset, you may be able to exercise some control over cash outflows for costs of ownership and operations, such as maintenance and upgrades. These options do not exist for rented assets. Third, the number of dollars paid in rent usually exceeds the number of dollars you would spend to own the asset. The owner of the asset you are renting bears the risk of breakdowns, obsolescence, and disposal costs. Because of these risks, the owner must receive a

premium over the costs that you would incur if you were to buy the asset. Financing with Leases A lease is simply a rental agreement that specifies a minimum period of time for which you must make rental payments. Lease periods range from as short as a few days to 99 or more years, and leases can include other sorts of provisions or specifications for how the business deal or the leased property is to be handled. Thus, as lessee you may agree to bear the costs of maintenance, insurance, and taxes on leased assets. Alternatively, any of these costs may be born by the lessor. Leases provide a middle ground between renting and owning assets. Page 557 There are two basic types of leases, operating leases and capital leases. The two types of leases differ primarily in how the property is disposed of at the end of the lease period. Operating leases are leases that are similar to renting. In an operating lease, ownership of the asset never passes to you as the lessee. At the end of the lease period, you either return the asset to its owner, or you may purchase the asset at its then current fair market value. All other aspects of maintaining and operating the asset can be negotiated between lessor and lessee. Either party may be contractually responsible for maintenance and operating costs. Capital leases are leases that are essentially the same as buying the asset. At the end of the lease period the asset becomes property of the lessee, either without any additional payment or by the lessee paying a nominal amount. The test to determine if a lease is a capital lease, rather than an operating lease, is the existence of provisions for title of the asset to pass to the lessee at a price less than the asset's fair market value. The benefits of leasing are numerous. First, you can usually obtain a very low down payment. Second, the process of negotiating and closing a lease is usually less complicated and expensive than making a purchase and obtaining borrowed funds. A third benefit is that it is usually much easier for you to replace leased assets than it is to replace assets you own. Because actual ownership of the asset remains with the lessor until the provisions of the lease contract are fulfilled, the owner is not faced with the expensive and time-consuming process of repossession. As owner of the asset, the lessor may simply take it back should you default on the contract. Because of this, a lessor is less concerned with your ability to pay than is a lender and is willing to accept a lower initial investment from you in return for higher periodic lease payments. Similarly, because the lessor is in the business of acquiring and disposing of assets, the lessor assumes the responsibility of disposing of obsolete assets and providing new ones. The primary disadvantage of leasing is that it usually costs more than would purchasing. A secondary disadvantage is that leased assets are usually subject to numerous restrictions on how they may be used, maintained, and disposed of. Restrictive lease covenants are intended to provide protection to the owner by preventing the lessee from allowing the asset to lose value through misuse, neglect, or abuse. A typical lease restriction is a prohibition on driving or flying leased transportation equipment across an international border. Were you the lessee of a business airplane, such a provision could become a serious inconvenience

should you develop business that requires you to regularly travel to Monterrey, Mexico, and no airline offers such service from your home city. Fractional Ownership and Other Forms of Joint Ventures A less-used method of reducing the costs and risks of acquiring capital assets is the process of joint venturing. A joint venture is simply a formalized partnership between two or more businesses for some specific purpose. Joint ventures are quite common among medium to large businesses and are growing among small businesses.16 Joint venturing makes economic sense when each party to the venture has limited use of an expensive asset or faces major investments that could be sidestepped by partnering with another firm that already has made that investment. One area in which joint ventures are relatively common among small businesses is the ownership of airplanes. Airplanes are quite expensive. Even a 30-year-old Beech King Air turbo prop airplane can easily sell for $1 million. Although old, and by some standards obsolete, a King Air can still produce more than 6 million seat miles per year: the equivalent of 1,600 transcontinental trips. Very few small businesses need even a fraction of the transportation capacity produced by such an airplane. Because of these facts, it is common for airplanes to be owned by partnership arrangements among several businesses that share the costs proportionate to their use of the plane. Recently, some leasing companies have created an ownership structure similar to joint ventures, called fractional ownership. These companies offer buses, airplanes, and yachts under arrangements in which a small business may buy only that share that it can reasonably use during the course of business. In this manner, many small businesses now have access to business jets by having purchased as little as one-sixteenth of the ownership rights. Page 558 “Once bought, forgotten” might be the sort of saying that reminds all entrepreneurs about why managing assets is critical to being successful in managing a small business and its finances. Whether inventory or operating assets, most firms have substantial value tied up in the assets of the business. It is possible to make sure that these assets are being managed to be financially useful, and this chapter outlines the techniques—ranging from simple to complex—to do that. The simple techniques of inventory tracking and management can be easily grasped and implemented in a wide variety of settings. The more statistically driven approaches are increasingly workable, because they use functions built into spreadsheets or accounting programs’ inventory routines. Like so much in small business, asset management works if you take the time to do it or have it done for you.

Managing Operations 15-6 Describe techniques to manage and improve the operations of your business. No matter what your business is, the functions of management are always

the same: planning, organizing, staffing, directing, and controlling. You and your managers must establish the goals and objectives of your business. Once you have a set of coherent goals, you must make plans on how to attain them. You must organize and direct your business to attain the desired goals. You must also analyze the working of your business to be able to control it and to correct any variations from the planned procedures in order to reach the predetermined goals. These functions interact and it takes skill to coordinate them so you can accomplish your business goals, often through the efforts of others. Although the preceding paragraph was easy to write, and is easy to read, putting it into practice is far from easy. You must be able to determine which management functions are most important and be able to organize them by priority. Although all five functions are important parts of a manager's job, just how imperative each is varies with changes in the business, such as during the stages of a product life cycle. One simplifying fact for operations management is the fact that operations management is concerned primarily with directing and controlling. Planning, organizing, and staffing are primarily the responsibility of executive management. Operations management is focused on all of the activities of the business, such as producing product and moving it to customers. Throughout the book you have seen examples of the operations management decisions small business owners must make. These include managing your time in Chapter 5, optimizing your business's value chain in Chapter 7, managing the product and service life cycles in Chapter 9, and optimizing the location and physical layout of your business in Chapter 11. Similarly, much of this chapter deals with optimizing the use of your assets, like inventory and property. Along the way we have mentioned the kinds of strategic operational choices owners have to make about product design, process choice, capacity, quality, productivity, technology, workforce, and job design. The overriding goal of operations management is to be constantly improving the organization, through a more efficient use of resources and through improved or expanded service to customers, where "customer" means the next process as well as the final, external user. Because there is an operations element in every function of your business, people in all jobs should work together to improve their own operation efficiency. As the Small Business Insight relates, creative thought and a good understanding of your customers' needs is needed in times of business crises. SMALL BUSINESS INSIGHT Cabot Hosiery Mills: A Turnaround Story ©Darn Tough Ric Cabot was wrestling with a common business problem: competition from foreign suppliers who had much lower costs than Ric's business, Cabot Hosiery Mills, could ever attain. Long-time customers were choosing other suppliers. Sales and profits were on an unsustainable downward trend. Ric had few choices. He could close the business. He could contract with sock knitters in China or Thailand. Or he could somehow come up with an idea that would allow him to continue making socks in Northfield, Vermont. Few hosiery mills remain in the United States, and even fewer of these are in New

England. In fact, Cabot Hosiery Mills is the only sock maker left in Vermont. Cabot was primarily a custom manufacturer, producing socks for several apparel firms including Bass Shoes, Eddie Bauer, L.L.Bean, and Orvis. But by the early 2000s most of Cabot's former customers had outsourced their sock knitting to offshore mills, primarily in China and Thailand.17 • Harvey Stabene, R&D director on left, and Ric Cabot, Cabot Hosiery Mills president and CEO on the right, inside Cabot Hosiery Mills in Northfield, Vermont. ©Darn Tough Marketing research conducted for Cabot disclosed that there was a sizable percentage of people engaged in outdoor work and outdoor sports who were less than satisfied with the socks that were then available. To that end, Cabot developed an entirely new line of premium socks made solely from Merino wool, nylon, and Lycra.18 "Darn Tough has been a fantastic product for the company all over the United States and Canada. It's our brand and it will propel the company into the fourth generation. It's the most sustainable thing we do. We have wonderful private-brand customers, but the most important thing is to produce our own brand," Ric said.19 In fact, the Darn Tough Vermont sock has been way more successful than even the Cabots hoped. In the first quarter of 2012, Cabot Hosiery Mills reported all-time record profits on gross sales that are fully 260 percent higher than in the same quarter of 2010.20 Darn Tough continues to succeed today. According to a story posted in VTDigger, a Vermont state-wide news outlet, Darn Tough is currently in expansion mode, and expects to be making a million and a half pair of socks per year by the end of 2020.21 Inputs into Your Business The inputs of a business are determined by its objectives. Your business objectives establish which raw materials are needed in what quantities. Your objectives will determine whom and how many people you must hire. For you to keep your business running smoothly, you must have information (feedback) concerning the essential processes that comprise your production system. This is as true for service industries, as it is for retail and manufacturing. Business Operations Comprise Converting Time and Materials into Services and Products Page 560 Business, to a great degree, comprises operations, or taking materials, the time of workers, and the investment of owners and changing these things into a desired product or service. This is illustrated in Figure 15.3. The specifics of your manufacturing, marketing, and distribution must be known in detail. You must also have some understanding of the ways your employees act and react. Some people will be interested in all the fine details. Others will be indifferent to the details as long as the desired result is obtained. For example, a manager may not know or care about the details of how a report is created and circulated. He or she is interested only in the information that the report contains. On the other hand, your accountant will be concerned with the details of each step: gathering data, preparing the report, and communicating it to those who need it. FIGURE 15.3The Operations Process Business Outputs What constitutes the outputs of your business depends on what your business is. The output for a Liberty Tax franchise is completed income tax returns.

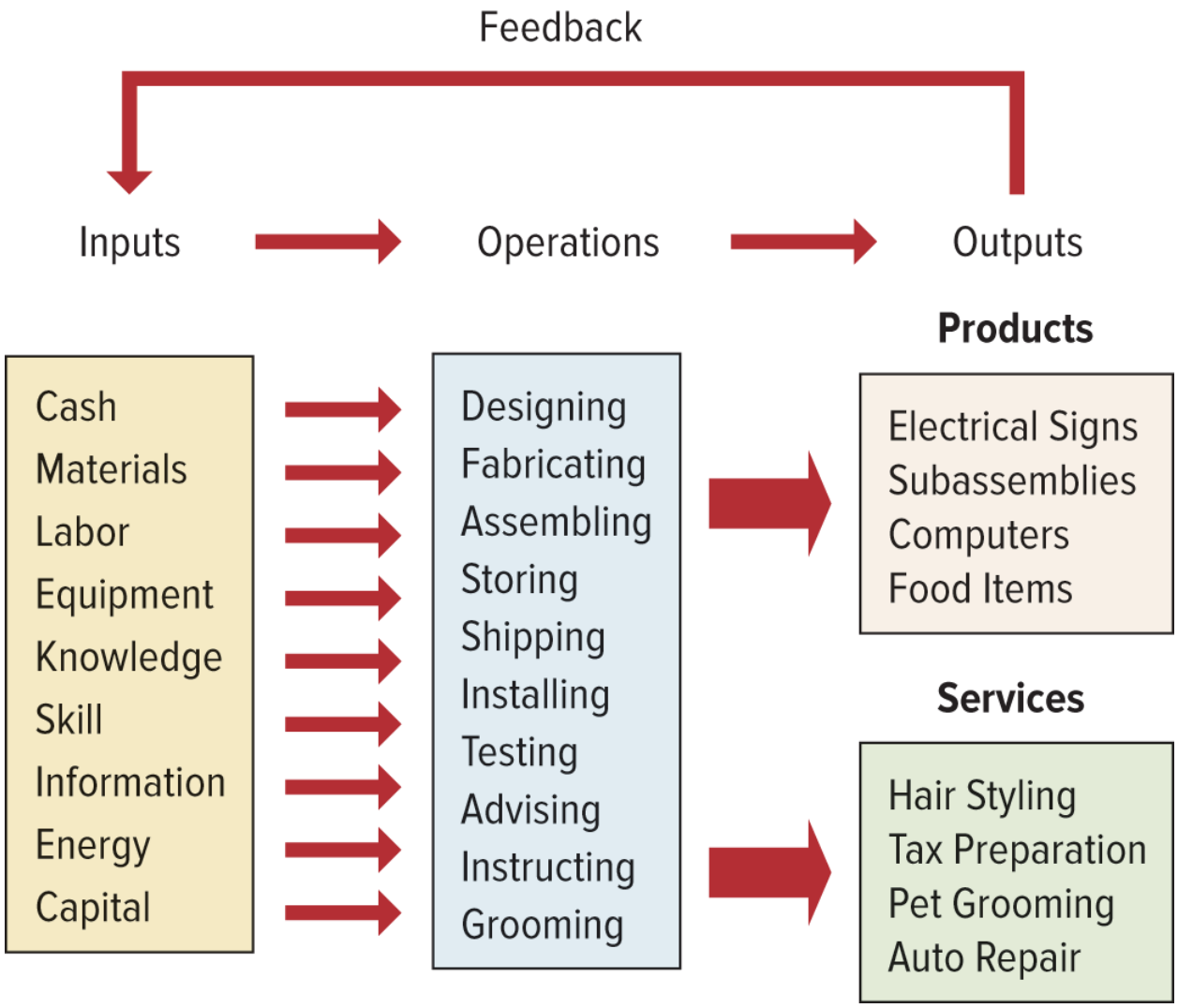
The output for an automobile garage is properly repaired cars. Generally speaking, output is the quality and quantity of goods and services produced, those things that produce revenue for your business. The entire system of your business should be designed to produce something that is desired in a market. Business customers of all types want goods and services that will make them more efficient, more effective, or more profitable. Individuals as customers will buy those things that provide greater comfort, improved health, enhanced entertainment, and so on. Feedback Any control system must have feedback. All inputs, material, and labor must be compared with a predetermined standard. If there is variation between the output and the standard, management action can be undertaken to correct the situation. A business that has multiple systems requires complicated feedback. Information must be communicated among all managers and employees who are part of the system. Operations control depends on three types of feedback: (1) informational feedback, (2) corrective feedback, and (3) reinforcing feedback. Informational feedback is just that: information about the processes of your business. Corrective feedback is evaluative and judgmental. It comprises a value judgment about processes and behaviors. Inefficient work processes and undesirable employee behaviors are provided with various correctional actions. The manufacturing line may be redesigned. Misbehaving employees may be given training or punishment. Punishment ranges from a "dressing down" to termination of employment. On the other hand, reinforcing feedback rewards efficient processes and desired employee behaviors and can range from a simple statement, "Good job," to tangibles such as money or paid time off. Measuring and Improving Productivity Page 561 The essence of production management is to ensure that the factors of production—materials, labor, machinery, land, and capital—are used efficiently to produce your business's product or service. Simply put, the major outcome of operations and production management is improved productivity. Productivity applies what you have just learned about inputs and outputs because productivity is simply the ratio of outputs to inputs, or: If you are creating a product (aka the output of your production process) that you can sell for $10.00 and it costs you $2.50 to make, your productivity ratio is 4:1. If you can cut your production cost to $2.00, you have increased your productivity to 5:1. That increase is hard dollar proof you have improved your productivity. You might have done this by saving money on energy or raw materials or labor. In short, you have increased productivity by improving the efficiency of your production process—where efficiency means doing the same with less. There is another way to improve productivity, and that is through improving quality. Quality is a product's or service's fitness for use. It is usually measured by characteristics such as durability (how long it lasts), reliability (how consistently does it work), serviceability (how easily can it be repaired), style (how attractive is it), ease of use, and overall dependability (how much you can rely on it). If you can make your product so much better that a customer is now willing

to pay $11.00 for the new improved product, your gain is 11:2.50 or 4.4:1. That is a 10 percent gain in productivity due to quality improvements. Outsourcing to Improve Productivity Entrepreneurs have long considered outsourcing to be a management method that could be used only by large firms. After all, entrepreneurs reason, where would I get the time, the contacts, the money to be able to oversee foreign contractors? This reasoning no longer holds for two reasons: First, technology has made outsourcing available, and second, outsourcing does not necessarily require dealing with foreign firms. In fact, your best choice for outsourcing to achieve better productivity for yourself and for your employees just might be in the office next to yours. To get the greatest benefit from outsourcing, you need to follow four simple rules: Know yourself. Nobody is good at everything. This is a truism that is often lost on entrepreneurs who are notorious for believing "if anyone can do it, I can." Misplaced self-confidence has in the past, and will in the future, cause many otherwise excellent ventures to fail. Before you decide what business functions to outsource, you must carefully examine your own weaknesses and strengths. Keep strategy decisions in-house. No one is likely to have the knowledge of your business and customers that you do. The success of your business is dependent on strategy. Outsource business functions and businesses activities, but keep strategy at home. Fully specify tasks that are to be outsourced. The single greatest cause of failure of outsourcing is lack of clear communications between the entrepreneur and the contractor. You will get the best results when you provide your contractor with exact details of the specifications to be met, methods to be used, outcomes to be delivered. Know with whom you are contracting. You will be satisfied with the results of outsourcing if, and only if, you choose competent contractors. Companies and individuals to whom you may outsource have specific competencies, just like you do. Not all CPAs are expert in small business issues. Not all biotech research labs can produce and purify proteins. You must perform careful investigation of the contractors available to choose the best one for your business. The most commonly outsourced functions of small businesses are legal and accounting. Most entrepreneurs are neither lawyers nor accountants, and many quite frankly will tell you that they have no interest in attempting either area. There are many functions other than legal and accounting where you could benefit from outsourcing. To identify these functions you need to identify things that you are currently doing in-house that could be done less expensively or more efficiently by expert contractors. In the final analysis all business functions and activities are potential areas for outsourcing. Page 562 Finding Outsourcing Contractors As you would expect, the web provides a multitude of websites to help you find competent companies to which you can outsource services and manufacturing. The oldest and best-known of these sites for manufacturing is alibaba.com. Alibaba was started in Hangzhou, China, by Jack Ma and a group of 17 other investor-founders. It initially was intended to be a trading platform something like eBay for

small Chinese manufacturers to sell their products. Since its founding Alibaba has grown to be the largest business-to-business trading site in the world. The best-known website for contracting with individuals is Upwork, based in the United States. Upwork claims to have over 10 million registered contractors and to have generated more than $1 billion annually in contracts. The following Learn More Online box lists websites for outsourcing services and manufacturing. Areas Where Outsourcing May Be Right for Your Business Support services Legal Accounting Tax preparation and compliance Website development and maintenance Payroll services Safety and OSHA compliance Human resources/employee benefits Food service Janitorial Noncore business functions Marketing and advertising Customer fulfillment/shipping Research and development Customer service Technical support Warranty services Repetitive business activities Data entry Day-to-day bookkeeping Accounts payable entry Cold calling for new business leads Core business functions Manufacturing Packaging Product design Sales LEARN MORE ONLINE Learn more about the topics above at these sites: Alibaba: www.alibaba.com Upwork: www.upwork.com Freelancer: www.freelancer.com Guru: www.guru.com Page 563 Operations Management Challenges for Product-Based Firms In talking about productivity, the examples were primarily of product-based firms. Product-based firms take some sort of materials—groceries for a restaurant, crude oil for a refinery, or wood and pen parts for a high-end pen manufacturer like Michel Perchin ($1,000 and up) or David Oscarson ($4,000 and up) and add labor and technology to create a product. There are places for efficiencies all along the production process (or as we saw in Chapter 7, along the entire value chain, for that matter). Consider high-end pens. One way to improve the efficiency of the production process is to use advanced technologies like lasers to help cut and drill quickly and precisely. Or using computerization with the laser to combine several steps into one, making it possible to produce more perfect pens faster. Another approach is to get the latest raw materials first when they are “hot” in the market. If moon rocks became commercially available, imagine what a pen made from moon rock would be worth. As more moon rocks would enter the market, the price would drop, so the best profits would come to the pen maker who gets the moon rock first into production and first into the hands of rich status-conscious buyers. From this you can see the two major sources of efficiencies for product-based firms. One is to increase the amount, speed, or accuracy of work done for every day of operations. This can be done through scheduling improvements within the firm like those seen in the time management approach described in Chapter 5 or in this chapter’s approach to inventory management. Another approach is to improve parts of the supply chain outside the firm so that raw materials get into production faster and that finished products get into customers’ hands faster too. How do you figure out ways to improve operations? There are several sources of expertise you can use. Our reliable friends at the SBA and SCORE can offer help, much of it low-cost or even

free. Other major and relatively inexpensive sources are trade and professional associations. They often publicize best practices which represent the most productive ways found in your industry. Often, top-performing firms will share their secrets of success with the rest of the industry to help improve the overall quality. It also does not hurt in advertising to say that “our procedures are now the industry standard, but we know more about them than anyone else!” Another interesting source of free advice can be your vendors. For example, UPS, DHL, and FedEx will be glad to consult to you (for free) on ways to improve your supply chain. Although many of the answers will end with “we will be glad to do it for you” followed by a price quote, the analyses they can offer, as well as information about how other companies like yours have benefited from supply chain efficiencies, can help open new ideas to you. Similarly, raw material suppliers or equipment vendors will also be glad to consult with you on ways you could improve your productivity in areas where they have expertise—and possibly some equipment or supplies to sell you. The advice is often free and very current. Get it from competing firms to make sure you get the best ideas, and in case you are thinking about buying, also get the best price. Operations Management Challenges for Service Firms Service firms face several challenges in obtaining and maintaining efficient processes. Three characteristics of services—intangibility, inseparability, and perishability—impact operations choices and decision making, creating challenges for the managers of service operations. These characteristics confound and limit strategic choices and tactical decisions available to you. The intangibility of services is a fundamental difference from goods. Services cannot be seen, felt, or tasted in the manner that goods can be. In contrast, tangible goods are produced, shipped, sold, and consumed in separate places. Another characteristic of a service is its inseparability: a service is produced and consumed at the same time. This exposes the entire production process to customer examination. In the manufacturing processes, the customer is rarely present. When producing services, however, the customer is usually present, preventing any clear distinction between the production stage and the consumption stage. Services are also perishable. In services, unused capacity is lost forever. Empty airline seats, vacant motel rooms, and unfilled theater seats not sold cannot be stored and sold later. Because of the characteristic of perishability, providers of services face great difficulty in managing capacity, and scheduling personnel. Page 564 However, despite intangibility, inseparability, and perishability, services can be improved. Part of the answer is deciding on a part of the service on which to focus. Services (let’s use bowling as an example) tend to have differing degrees of four components. One component is called the explicit service. In bowling, rolling the ball and counting the pins dropped is the explicit service. The bowling takes place in a bowling alley, and that building with its balls and pins and equipment is what is called the supporting facility. Part of the bowling experience depends on how you are treated—the friendliness of the staff, the

process for which you are charged, and the cleanliness of the alley are examples. These aspects of what we usually think of as customer service are called implicit service. The fourth element, called a supporting good, refers to some tangible material outcome (remember that products were called “goods” in Chapter 9) you get from the service. In bowling there are no tangible outcomes, unless you ask for a receipt. Because there is no real supporting goods in bowling, it is an example of a nearly pure service. Recall that in Chapter 9 we talked about pure services, pure goods, and the hybrids that include elements of both. With these four elements in mind, it can become easier to target a way to improve the service. For a bowling alley, the owner could improve the supporting facility by getting faster pin-setting equipment, or adding more parking. The owner could add lights and sound equipment for “cosmic bowling” to improve (or at least expand) the explicit service. Improving cleanliness of the facility or getting the staff to be friendlier are ways to improve the implicit service, while a supporting good could be offered by giving bowling related tangibles, such as coupons for future games. Also take a moment to consider innovative ways to improve service. For example, you could use the Internet to expand service delivery. Offering to post bowlers’ pictures and high scores online, or sending them an email with their scores, or letting customers network online for scheduling, or offering video analysis of a person’s bowling stance are all implicit services that could add value to the customer and improve (as well as expand) the bowling experience. The techniques for learning more about how to improve services are identical to those discussed for product-based firms. And if you have employees, there is one more great resource for improving productivity—asking them and putting their ideas into action. Employees of your business each have unique skills and knowledge. As your business grows, you most likely will find that certain employees have a greater understanding of certain functions of your business than do you. By including these people in the management process, you (1) ease your own work burden and (2) gain the advantage of expert input into the management process. The point is that almost every service (and product) can be improved. In the long run, desirable operational improvements make your customers more loyal and your company more able to withstand competitive pressures. Operations management can add to the bottom line through efficiencies, through revenue growth, and when done right, to both at the same time.


Feedback
Inputs
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Labor
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Information
Energy
Capital
Designing
Fabricating
Assembling
Storing
Shipping
Installing
Testing
Advising
Instructing
Grooming
Products
Electrical Signs
Subassemblies
Computers
Food Items
Services
Hair Styling
Tax Preparation
Pet Grooming
Auto Repair

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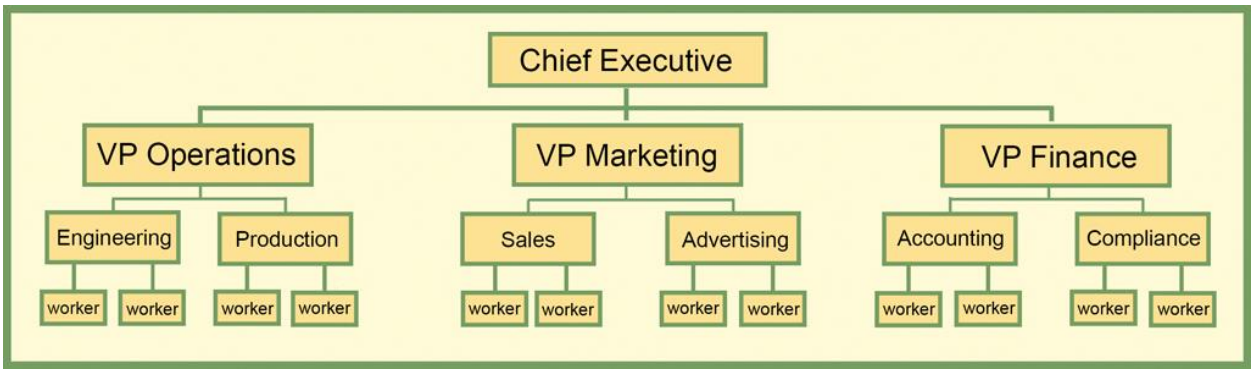
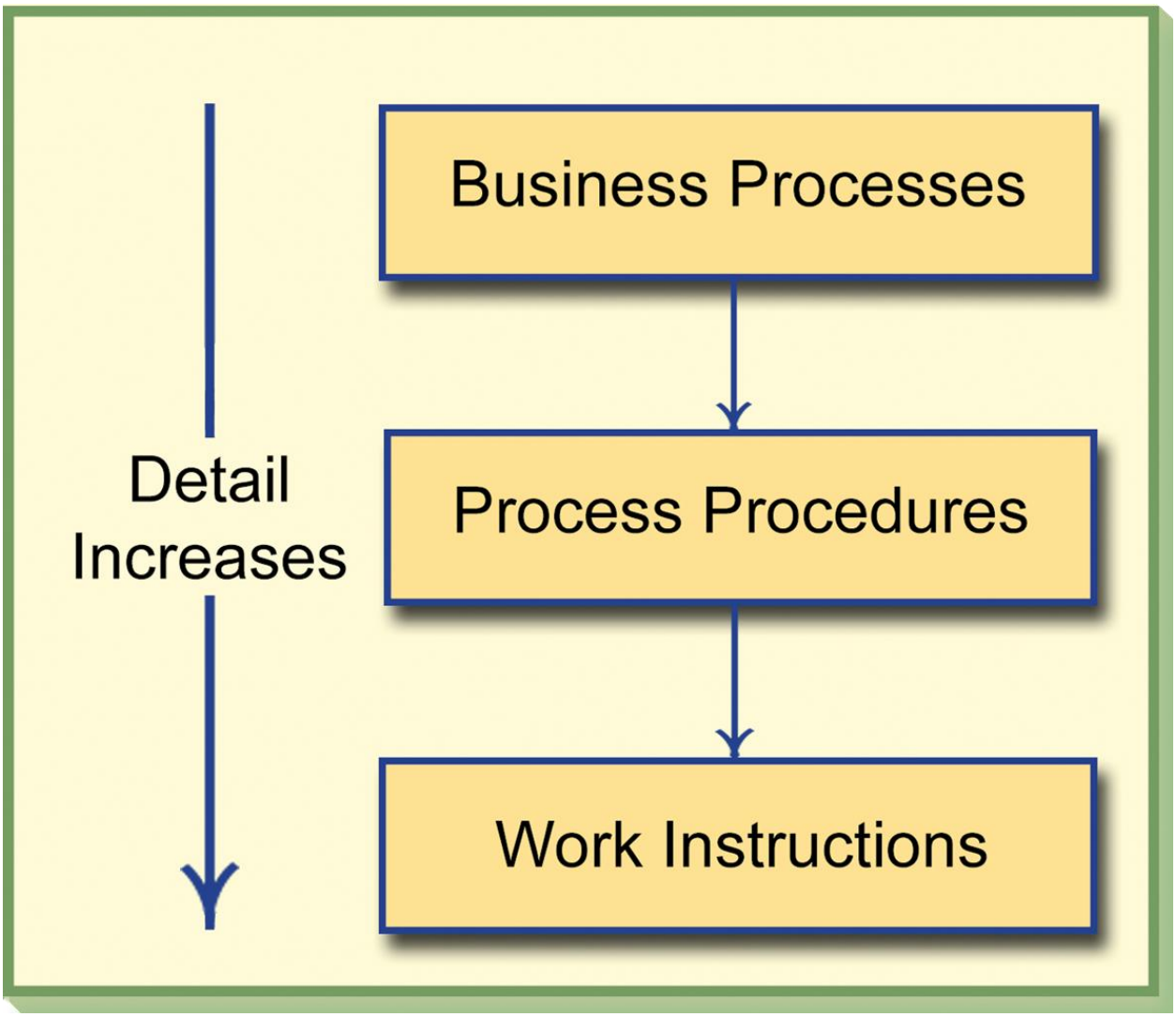
Documenting the Operations of Your Business 15-7 Be able to discuss the need for and value of documenting your business operations. If you are like most owners of small businesses, your most precious resource is your own time. This leads to the common situation where the knowledge of how your business really works is locked up in your own head. This is probably fine if your business is strictly a one-person operation. But it can cause big problems once your business starts to grow and you have to depend on others to make decisions, plan projects, and direct operations. So, what to do? First, you are going to have to realize that to effectively use that expensive talent that you are paying your employees for, you are going to have to give up some personal control. This is the requirement that many entrepreneurs find so difficult as to be nearly impossible. But once you are over that hurdle you are more than halfway to getting your business processes documented to the point that the business will continue to run smoothly, even if you are not making every single decision. Page 565 To put this strategy into effect, you must understand how processes, procedures, and work instructions relate. A process is what a business does when it takes some raw material and converts it into a valuable output. This applies evenly to manufacturing and service businesses. A manufacturer will take materials, use labor to convert it, and make a final output, the product. A service business takes client data, and adds experience and skill to convert the data into the desired output, such as an audit report or an income tax return. Regardless, the process is converting an

input to a desired output. A procedure is simply the step-by-step method by which the process is completed. A procedure might entail welding two pieces of steel, grinding the weld, cleaning and etching the part, and applying a corrosion-resistant coating. Work instructions specify how the weld is to be made: by plasma beam, gas envelopment arc welding, gas welding, or brazing. The instructions may specify the shape and thickness of the two edges to be welded, the composition of the flux used, the welding alloy, and so forth. Work instructions can be very large. Exactly where to start documenting your business processes, and how to proceed with the task, depends on the state of your business. If you are working as a one-person operation, then where you start is right now. As you make the decisions and conduct the transactions that comprise your business operations, just take a few minutes to write down what you just did. A good way to do this is to create a simple document and print out a number of copies. Insert them into a three-ring binder and keep the binder with you all the time. As you solve business problems, write down what you did, how you did it, and what you needed to complete the task. This will take some of your time, and occasionally you will forget to do it. But if you make an effort, it will soon become habit. Figure 15.4 shows a suggested form for your notebook. FIGURE 15.4Sample Form for Documenting Business Processes Page 566 But what if your business has already grown to the size that you have employees and you are outsourcing functions, such as your accounting? Well, the same process will have to be completed. The big difference is that you will have to enlist the involvement of your employees and consultants. After all, who knows what they are doing better than they do themselves? This is usually accomplished by conducting interviews. (This is a really good task for that intern from your local college.) After the interviews are completed, you can review the sheets and then go back to the involved employee for any additional information that is needed. For the case of an operating, multipurpose business, there are some techniques of completing the business documentation that are more or less accepted as standard processes. Again, however, the level of detail and the difficulty of completing the task is largely determined by the size and complexity of each individual business. FIGURE 15.5Relationship of Process, Procedure, and Work Instructions A typical start to the task of documenting the processes of an operating business is to start from the top down. At the highest level, your business is conducted by conducting specific processes. The processes are completed by conducting necessary procedures, and procedures are done through a set of specific work instructions. Figure 15.5 shows this graphically. The familiar organization chart, shown in Figure 15.6, provides just such an overview. FIGURE 15.6Typical Format for an Organization Chart Finally, it is very important that you realize that every business process does not have to be extensively documented. Some procedures are so routine that they can easily be programmed into your business computer system for automatic or semiautomatic completion. Some procedures, such as most accounting procedures, are so well

documented in statements on best practices, authoritative pronouncements, and regulations that you add no value by rewriting them. This is why most accounting documents produced by CPAs simply state, “This report was compiled using generally accepted accounting principles (GAAP).” GAAP is so well documented that there is no need to specify what it entails. The procedures that you want to document are those that you must because of governmental regulation and those that are essential to your business. Developing a set of business procedures is time-consuming, and therefore expensive. To have a value greater than their cost they must be carefully reviewed and updated as business processes change. However, if done correctly documenting your business will provide many benefits in the form of fewer employee mistakes and less waste and scrap in your processes. Oh yes, another point: Having extensive documentation of the essential and unique processes of your business will make selling it much easier when the time comes for you to do so.




Business Processes
Process Procedures
Work Instructions
Detail
Increases

1. What is the task to be done? a. How often is this task done? b. How long does it take? c. When is it done? (order in January, License in April, etc.)	
2. What causes you to do this task?	
3. How is this task completed? a. List the steps. Continue on the back, if needed.	1. 2. 3. 4. 5. 6. 7.
4. What is the result of this task? a. (order is placed, RFP is routed to engineering, etc.)	
5. What documents do you need? a. paper documents? (invoice, bill of lading, etc…) b. database document? (dates, amounts, payment info, etc.)	
6. What documents are created and saved for this task?	

Notes:

CHAPTER SUMMARY 15-1 Describe techniques to manage short-term assets. Two short-term assets other than cash are critical to the success of most small businesses: accounts receivable and inventory. Offering credit can benefit a business in many ways, if the credit process is well thought out and carefully managed. High-quality receivables provide a

means to quickly get cash to meet unexpected opportunities and problems. Inventory management is critical because for many small businesses inventory is the single greatest asset. Inventory requires significant cash investment that ties up capital that could be used for other business purposes. Careful management of inventory involves keeping the right amount of inventory available for sale and ordering the right amount of inventory at the right time to avoid both having too much on hand and running out of inventory, thus losing sales. Techniques of inventory management include economic order quantity, just-in-time inventories, optimum stocking level, periodic inventory, perpetual inventory, bar coding, and point-of-sale systems. 15-2 Calculate the value of the assets in your business. Assets in use usually have a value greater than can be realized by selling them because of the value present in the assets' future use. Because the value of future use is very difficult to determine, accounting methods used to value capital assets are (1) book value, (2) disposal value, (3) replacement value, and (4) fair market value. Of these four methods, only book value and replacement value can be accurately determined. Each of the four accounting methods is useful in different situations: Book value is used for financial reporting to outsiders. Lenders prefer disposal value for the purpose of accepting collateral for a loan. Disposal value is useful for estimating cash flows for discounted cash flow analysis. Replacement value is useful for estimating sales prices for individual assets and for the business as a whole. 15-3 Describe techniques for managing fixed assets. Capital assets create four costs across their useful lives: (1) the cost of acquiring the asset, (2) the cost of owning the asset, (3) the cost of operating the asset, and (4) the cost of disposing of the asset. Better decisions result when all the costs previously mentioned, called whole of life costs, are considered in the investing analysis. 15-4 Calculate ratios used to analyze capital investment decisions. The two most commonly used financial ratios for comparing investment alternatives are (1) payback period and (2) return on investment (ROI). There are also two significantly more complex approaches called net present value (NPV) and internal rate of return (IRR). Discounted cash flow methods (NPV and IRR) are the most complete because they include the greatest amount of data in the analysis. 15-5 Describe the advantages of renting or leasing capital equipment. Renting requires little or no down payment. It therefore preserves cash. As a renter, you usually do not bear the costs of maintenance and repair. Leasing provides the same advantages as renting, but also provides assurance the asset will remain available for your exclusive use. Joint venturing for assets that have limited use allows you to obtain the benefits of the asset, but reduces the cost of ownership by sharing with other businesses. 15-6 Describe techniques to manage and improve the operations of your business. Operations management seeks ways to improve productivity. Increasing efficiency and increasing quality are the two ways to improve productivity. Page 568 Product-based firms can improve the amount, speed, or accuracy of work, or improve the supply chain. Service-based firms can improve their

explicit service, implicit service, supporting facility, and supporting good. You can get operations management advice from a variety of high-quality free and for-fee sources, as well as your own employees. 15-7 Be able to discuss the need for and value of documenting your business operations. Properly documenting the processes of your business will help employees conduct the business without your immediate oversight. Documentation may be required by regulation, dependent on the industry in which you operate. Documentation provides many benefits, one of which is to aid you in selling your business when the time comes for you to exit.

KEY TERMS accounts receivable factoring pledging receivables lock box inventory economic order quantity (EOQ) optimum stocking level safety stock pull-through system just-in-time (JIT) inventory microinventory periodic inventory perpetual inventory bar coding point-of-sale (POS) system capital assets book value disposal value arm's-length transaction replacement value fair market value inventory valuation physical inventory acquisition cost replacement cost property plant equipment whole of life costs cost of owning cost of operating cost of disposition capital budgeting payback period return on investment (ROI) straight line for a useful life of 10 years renting leasing outflow operating lease capital lease inputs operations outputs feedback productivity efficiency quality outsourcing supply chain best practices process procedure work instructions.

DISCUSSION QUESTIONS Discuss the pros and cons of providing credit to customers. If you do decide to provide credit, what policies should you establish and enforce? Discuss how the use of economic order quantity (EOQ) and reorder calculations can benefit a retail business. What are the drawbacks in using these calculations? Which of the asset valuation methods (book value, disposal value, replacement value, and fair market value) is the best for determining the value of your business's assets? Explain your choice, detailing how your preferred method is better than the other three. How would you estimate the whole of life costs of an expensive capital asset, such as an executive airplane? Discuss the advantages and disadvantages to payback period and to return on investment (ROI) as analysis tools for making capital investment decisions. Which do you prefer and why? Under what circumstances might you be more profitable by outsourcing production? What are the reasons for documenting the processes of your business? Under what circumstances is documentation of processes not necessary?

EXPERIENTIAL EXERCISES Choose a local business in the industry in which you would like to own a firm. Visit the business that you choose, and walk about to observe the amounts and types of inventory on display. Interview the owner or manager. Determine the approximate value of inventory kept on hand. Find out the average time that any single item stays in inventory before it is sold. Also find out the minimum order quantities and delivery times of inventory. Use this information to estimate the amount of working capital necessary to maintain inventory. Make a report to your class. Make a search, using your library, the Internet, and your business contacts, to find factors in your area. Interview the factor and determine the terms offered. Ask what things about the receivables are considered in pricing the factor contract. Contact a commercial banker in your area and find out the bank's policy for lending against receivables. Report your findings to your class. Contact a dealer who sells expensive capital assets, such as earth-moving or transportation equipment. Find out the costs of acquiring, owning, operating, and disposing of the asset. Use a spreadsheet program to estimate the amounts and timing of the whole of life costs of the asset. Estimate the cash inflows that the asset will produce. Use your estimates of costs and cash inflows to calculate the NPV, IRR, ROI, and payback of the asset. Make a presentation to your class, detailing the calculations you have made. Assume that you have a plumbing business that requires the use of a backhoe. Contact equipment rental businesses in your area and find out the rental cost and terms for a suitable machine. Contact leasing companies to find out the cost of leasing a similar backhoe. Assume that, on average, you need the machine for 12 hours weekly. Which is more advantageous, renting or leasing? How would your answer change if you needed the machine an average of 20 hours per week? At what level of usage would renting and leasing not matter? Assume that you own a 2018 Ford F-750 Super Duty truck. The truck has been driven 32,000 miles. What is a reasonable disposal value for this truck? (Be sure to reduce your estimate of sales price by the costs of selling the asset.) What is the replacement value of this truck (in other words, how much would another F-750 with 30,000 miles cost to find, buy, finance, deliver, and license)? Peruse newspaper ads, search the Internet, and talk with truck salespeople to estimate the truck's fair market value. Make a report of your findings to your class.

MINI-CASE QUALITY SIGN COMPANY The Quality Sign Co. of Visalia, California, provides credit to customers. The firm is currently averaging receivables of $34,500. The business needs an additional truck-mounted crane to keep up with its rapidly growing business. Quality's owner, George McElroy, has worked up an estimate of the cost of a suitable crane,

which is presented in the following chart. Quality's bank is willing to loan 90 percent of the purchase price of the truck, crane, and equipment. All of Quality's currently available cash is needed as working capital and is not available to invest in this project. As a result, Quality must find a way to finance the 10 percent that the bank will not loan, plus the other costs of acquisition. Quality has contacted a factor who has offered to pay 80 percent for all accounts that are less than 60 days past due. The factor is also willing to act as a collection agency for those accounts that are 60 or more days past due for a fee of 25 percent of the amount collected. Alternatively, Quality's bank has agreed to make a 90-day loan discounted at 12 percent interest in the amount of $32,100, secured by 100 percent of outstanding receivables. The sum of $32,100, which includes accrued interest, is due on the 90th day after the loan is made. During the 90 days, all new receivables will be pledged to the bank as they are incurred. Quality will continue to collect the receivables in the normal course of business. Examine the financial information provided and prepare a recommendation to George McElroy. Table Summary: Table divided into three columns summarizes purchasing cost of crane based on interest and time period. Column 1 notes the account heads with column 2 showing the value in dollars. Cost of Acquiring Mobile Crane Ford F-750 Tandem truck $ 73,000 120-foot heavy-duty crane 67,000 Hydraulic outriggers 12,500 Hydraulic pump 8,000 30-foot truck bed 5,000 Installation of bed 1,500 Delivery 1,500 Sales tax 12,338 License 1,000 Total acquisition cost $181,838 Table Summary: Table divided into three columns shows value of incurred charges based on time period. Column 1 notes the account heads with column 2 showing the value in dollars. Accounts Receivable Current $34,500 >30 days 6,000 >60 days 5,000 >90 days 4,000 Delinquent 4,000 Total receivables $53,500

APPENDIX A: Economic Order Quantity To solve for the quantity at which total inventory costs are minimized, consider the following definitions: EOQ = economic order quantity in units (quantity that minimizes total inventory cost) Q = quantity in units to be ordered at one time P = price of one unit of inventory O = cost of placing one order C = cost of carrying one unit in inventory for one year D = number of units to be sold in one year (demand) D/Q = number of order cycles per year Q/D = length of one order cycle as a fraction of one year The total cost of making a single order is calculated as: Total cost of one order = O + P × Q The total cost of holding inventory is the cost of holding one unit in inventory times the average number of units held during one order cycle times the number of order cycles in one year. If the number of units at the beginning of an order cycle is Q, and the number at the end of the cycle is 0, and sales are made at a constant rate, then the average number of units held is (Q + 0)/2, or simply Q/2. The length of one order cycle, as a fraction of one year, lies between 1 and 1 divided by the number of units to be sold in one year. Holding cost per

order cycle = C(Q/2)(Q/D) which can be simplified to: Holding cost Per cycle = CQ2/2D The total cost of ordering and holding inventory for one order cycle is the sum of these two equations. The total cost of inventory for one year is the cost for one cycle times the number of order cycles per year: Total annual cost = [(O + P × Q) + (C Q2/2 D)] × D/Q = [O(D/Q) + DP + C(Q/2)] The purchase price of inventory (DP) is independent on how many units are ordered at any one time and how many orders are made, and thus may be disregarded. This provides the total cost of ordering and holding inventory: O(D/Q) + C(Q/2) Page 572 The minimum value of this equation is found by setting the first derivative equal to zero and solving for Q: Q = (20D/C)0.5 The EOQ calculation indicates how much to order at one time. It does not tell you when to order, however. To make this decision, you have to know how much time will pass between when the order is placed and when the inventory will be received. Suppose that the lead time is one month and that your business uses 600 units of inventory each month. You therefore must reorder when inventory levels fall to 600 units, leaving you with one month's supply on hand. But what if your usage fluctuates, say, between 400 and 700 units of product each month? If you wait to reorder until inventory drops to 600 units and you then have a high-sales month, you could run out of inventory long before you run out of month. To protect from this, you can set a policy of maintaining a safety stock of surplus inventory over the minimum. You will reorder when inventory drops to 700 units. This will increase the cost of carrying inventory, but for almost all businesses, the cost of carrying inventory is a fraction of the cost of lost sales. Thus, for you, the cost of holding safety stock is offset by the advantages of not having a stock-out situation. As you can see from this explanation, deriving the economic order quantity equation requires the use of calculus. Additionally, there are two simplifying assumptions that are unrealistic: Ending inventory quantity is zero for each order cycle. The purchase price of inventory is not affected by the number ordered at one time or by the number of orders placed. In reality, neither of these assumptions is likely to be true. However, providing for a positive ending inventory and for a price that varies with changes in order quantity and number of orders complicates the solution so much that nobody bothers to do so. Thus, EOQ determination is another example of an accounting or finance calculation that is approximately true, but precisely wrong. This is why it is necessary to apply common sense to the mathematical solution.

APPENDIX B: Time Value of Money and Discounted Cash Flow Analysis Which would you prefer: One dollar right now, or one dollar to be received one year from now? Certainly, you'd prefer to have the dollar today. Anyone would. But consider this: Suppose you were offered the choice between one dollar now or a U.S. savings bond that will pay you $10 one year from now. Which of these would you prefer? Most people immediately see the savings

bond as being more valuable. Now ask yourself, “Why is a dollar right this minute preferable to receiving a dollar in the future, but an iron-clad guarantee of 10 dollars one year from now is preferable to one dollar now?” Almost everyone, even young children, has an instinctual grasp of the concept that waiting for a benefit somehow lessens the immediate value of that benefit. Given the alternatives of a benefit to be received immediately and a benefit to be received later, the delayed benefit must be of significantly greater value if it is to be chosen. This simple concept is the basis of the concept of the time value of money. Suppose you knew for a fact that to save your life you would need to have exactly one dollar one year from today. You can make an arrangement with a bank to deposit any amount of money. The bank will pay 10 percent interest. How much must you deposit to have the one dollar when it is needed? Let x represent the amount that you will deposit. Then 10%x is the amount of interest that the deposit will earn in one year. The sum of the amount you deposit plus the interest earned must equal one dollar: x + 10%x = $1 1.1x = $1 x = $1/1.1 x = $0.91 In finance terms, we would state that the present value of one dollar, discounted at 10 percent for one year, is $0.91. Alternatively, we could say that the future value of 91 cents, compounded at 10 percent for one year, is $1.00. The term present value simply refers to the amount of money that would have to be deposited now to grow into a specified amount, given an interest rate and period of time. Future value is the inverse: the amount that a specific amount of money would grow to be, given a specific interest rate and period of time. With just a little bit of effort, this concept can easily be expanded to calculate the amount that you must deposit now, at any stated interest rate, to accumulate any amount desired to be received at any time in the future. For example, consider the problem of accumulating for four years: Value at the End of Year 1 Value at the End of Year 2 Value at the End of Year 3 Value at the End of Year 4 (1+r)X (1+r)(1+r)X (1+r)(1+r)(1+r)X (1+r)(1+r)(1+r)(1+r)X Where: X = amount to be deposited r = interest rate to be earned The property that in years 2, 3, and 4 interest is being earned on interest from the prior years is called compounding. PRESENT VALUE AND FUTURE VALUE OF 1 Notice that the value at the end of each year is equal to the amount deposited multiplied by 1 plus the interest rate, raised to the power of the number of the period. This allows us to develop an equation that can be easily solved for any amount deposited, any interest rate, and any number of compounding periods: FVn = PV(1 + r)n Page 574 Where: FVn = future value of the investment at the end of n years PV = present value (the amount to be deposited) r = annual interest rate (also called compounding rate, or discount rate) n = number of periods that the deposit is compounded By solving the equation for PV, we can develop a general equation that will answer the original question “How much must you deposit now, at a stated interest rate, to accumulate a desired amount at a specified time in the future?” PV = FVn × 1/(1 + r)n Thus, if you need one dollar four years from now, and you can earn 10 percent compounded annually, you must deposit 1/(1.1)4 dollars, or 1/1.4641, which

equals 68.3 cents. The calculated value of (1 + r)n is called the future value of one, and can be calculated for any discount rate, r, and any period of time, n. Similarly, the calculated value of 1/(1 + r)n is the present value of one. You can easily calculate either the future value or present value of any amount by simply multiplying that amount by the appropriate future value or present value of 1. Thus, if you needed to have available $68,301.50 five years from now and you can earn an interest rate of 8 percent, you would multiply 68,301.50 times the present value of 1 for five years at 8 percent: 68,301.50 × 1/(1.08)5 68,301.50 × 1/1.4693 68,301.50 × 0.6806 The amount that you would have to deposit today is approximately $46,485.75. PRESENT VALUE AND FUTURE VALUE OF AN ANNUITY As the owner of a small business, you will often need to know information about the value of a series of equal payments over time. A series of equal payments made regularly over a set period of time is called an annuity. For example, suppose you know that in three years you will have to replace an essential piece of equipment for your business. Your best estimate is that you can deposit $500 per month for three years at 8 percent interest in order to have sufficient money to make a down payment. How much would you have at the end of three years? The answer to this question can be easily, but tediously, solved by making a series of calculations. First, you must calculate the monthly compounding rate by dividing 8 percent by 12 months. Then, you use this monthly rate of 0.00666 to calculate the future value of each payment, then simply sum all 36 values: FV = $500 × (1 + 0.00667)36 + $500 × (1 + 0.00667)35 + $500 × (1 + 0.00667)34 +…+ $500 × (1 + 0.00667)1 635.119 + 630.912 + 626.734 +…+ 503.333 There is, however, a much less tedious, although slightly more difficult, means to calculate the future value of an annuity. The above summation equation can be solved algebraically, providing the following: Where: C = cash payment per period r = number rate n = number of payments Substituting values into this equation provides: rounded to the nearest whole dollar. Page 575 The present value of a series of equal payments may be similarly solved by discounting each payment and summing all the payments. However, this summation equation has also been reduced to a formula: Thus, by substituting in the appropriate values, you may easily calculate the present value of an installment contract, a lease, indeed, any series of equal payments. DISCOUNTED CASH FLOW ANALYSIS These simple concepts and calculations are the basis of all discounted cash flow analyses. Estimated current cash expenditures and net future cash inflows are discounted by some appropriate rate to derive net present value and internal rate of return. NET PRESENT VALUE To perform a net present value analysis, you must: Estimate the amount and timing of all cash flows of the project. Select an appropriate discount rate. Discount to present value each cash flow using the selected discount rate and timing. Sum the discounted cash flows. As you can see from the steps above, net present value (NPV) is simply the sum of all cash flows, both negative and positive, discounted by an appropriate discount rate. The difficulty of NPV analysis lies first

in accurately estimating future cash flows and second in selecting an appropriate discount rate. Performing the calculations is trivial. Estimating future cash flows is basically a process of guessing the revenues and expenses that the project will create. Revenues and expenses are then netted for each time period, usually by month, quarter, or year. The estimating process can be as simple or as complex as you believe necessary to produce reliable numbers and dates. Selecting an appropriate discount rate is absolutely essential to the utility of the analysis. If you select too high a discount rate, desirable projects will be rejected. Select too low a discount rate and money-losing projects will be accepted. Arguments can be made for using any of three very different discount rates: (1) cost of capital of your business, (2) the incremental cost of capital (or marginal cost of capital), and (3) a management-selected minimum acceptable rate of return. The computation of NPV is accomplished by the following algorithm: Where: NPV = net present value of the project CF0 = initial investment in the project CFn = cash flow at period n r = discount rate To illustrate the calculation of NPV, consider the following: You are thinking about purchasing for your restaurant a pressurized fryer that will allow you to rapidly prepare spicy deep-fried chicken wings. You believe that the demand for this product will peak within a year, then decrease to zero over three years. The total cost of the fryer, installed and ready for service, is $25,000. The cost of disposing of the fryer at the end of its useful life will be equal to its value at that time. In order to make an NPV analysis, you have determined that your weighted average cost of capital is 24 percent. You estimate that the fryer will provide the following cash flows to your business: Page 576 Cash flows ($25,000) $20,000 $8,000 $4,000 $2,000 Time period Right Now (t0) One Year from Now (t1) Two Years from Now (t2) Three Years from Now (t3) Four Years from Now (t4) Net present value of these cash flows is calculated as follows: You may easily calculate the present value of the individual cash flows by using a financial calculator, any calculator that does powers, or a computer spreadsheet such as Lotus 123, Quattro Pro, or Excel.22 The calculated NPV is ($724.16). Because the NPV is less than zero (a negative number), you should reject this project because it would not provide a return as great as your business's weighted average cost of capital. Although the decision rule for NPV indicates that the project should be rejected, remember that all the numbers on which the analysis is made are estimates. No matter how carefully you attempt to estimate future results, you can never do so with certainty. In fact, were you to purchase the fryer, you might find that the product was either much more successful or much less successful than you would ever have expected. There are several ways to deal with this inevitable uncertainty. You can change your estimates slightly up or down, a process called sensitivity analysis, to determine the effects of small changes in your estimates. For example, if you were to increase your estimate of the first year cash flows by just $898, the decision would change to "accept." If you enjoy doing math, you could adjust each of your estimates for the probability of their being correct,

then use the expected values in the analysis. You might reconsider using weighted average cost of capital for the discount rate. Perhaps you should consider using the cost at which you can borrow funds. Or you might consider using a discount rate that is the sum of the cost of borrowing and some minimum return that you are willing to accept. In fact, in this example, reducing the discount rate by less than 3/10 of one percent reverses the decision. INTERNAL RATE OF RETURN Another way of dealing with the uncertainty of NPV analysis is to ask the question, “If this project does not provide a return equal to the discount rate, then what rate of return does it provide?” Internal rate of return (IRR) provides the answer to this question by disclosing the actual rate of return, based on the amount and timing of the cash flow. The internal rate of return of a project is that rate at which NPV = zero. In other words, IRR is the discount rate at which the present value of the cash inflows of the project exactly equals the present value of the cash outflows. Thus, in this example, you must solve the following equation for the value of the discount rate (IRR): It is unfortunate that there is no way to directly solve this equation for IRR. The only way to find the value of IRR is to try different numbers in a reiterative process until you find a number that provides a solution sufficiently close to zero. Financial calculators, such as those provided by Hewlett-Packard and Texas Instruments, all provide an automated means to derive the answer. Computer spreadsheet programs also provide functions to find the IRR of any series of cash flows. If you do solve the previous equation, you will find that the IRR is approximately 21.59 percent. Compare this number with your estimate of your cost of capital, 24 percent. The question you must answer is, “How confident am I that my cost of capital actually exceeds 21.6 percent?” If you are confident, reject the project. If, on the other hand, you are not so sure, perhaps you should reconsider the assumptions and estimates that you have made. Page 577 APPLYING THESE APPROACHES TO THE TRUCK AND CRANE PROBLEM Earlier in the chapter we discussed the problem of deciding whether to buy a Ford–Skyhook or GMC–Sponco truck and crane combination. We worked through two simple methods for making a capital budgeting decision—the payback period approach and the ROI or rate of return on investment approach. We noted then that NPV and IRR approaches could also be used. Using either NPV or IRR will avoid the shortcomings of both the payback period and the return on investment methods. Discounted cash flow methods make specific numeric adjustments to approximate the lower value of money to be received as compared to the value of money received now. Net present value (NPV), like the payback period method, is based upon estimates of the cash flows that an investment will cause and utilizes your business’s weighted average cost of capital. It is like ROI in using the weighted cost of capital, but unlike ROI because NPV uses cash flows, not profits. When Warren Buffett is deciding if he will buy a company, he uses this technique. In his case he looks at the cash flow the business generates in a year and then figures how much it would be worth—after being discounted—at some point in the

future. For buying businesses, he uses a U.S. Treasury long-term bond rate23 for the period of time that he decides is appropriate. The final result of NPV calculation is a single dollar value, which can be of any magnitude, even a negative number, although the more positive the number, the better. For our truck and crane example, the time period is the 10 years the truck and crane would be used. We know from the owner's earlier calculations that her weighted cost of capital is 20 percent, and we saw the cash flows in Table 15.1. The computations are complex, but spreadsheets like Excel can do them quickly and easily. As with payback period and ROI, two decision rules are applied to decide among alternative investments: Accept only those alternatives for which the net present value is equal to or greater than zero. Accept the alternative with the greatest value among those that meet the first criterion. Ford–Skyhook GMC–Sponco Net present value = $108,112 Net present value = $107,544 Both alternatives meet the first decision rule. Applying the second, you would accept the Ford–Skyhook alternative because it provides the greater positive net present value. Internal rate of return (IRR) is a special case of net present value. IRR focuses on the return to the company, but also factors in the cost of the project. What is distinctive about the way IRR does this is that it statistically makes the net present value equal to zero, so the discount rate is thrown out as a consideration. The decision rules for using IRR are: Accept only those alternatives for which internal rate of return is equal to or greater than the business's weighted cost of capital. Accept the alternative with the greatest IRR among those that meet the first criterion. Ford–Skyhook GMC–Sponco Internal rate of return = 36.520% Internal rate of return = 33.373% As with net present value, both alternatives pass the first decision test. Of the two, you would choose the Ford–Skyhook alternative because it has the greater IRR. It is important to note that NPV and IRR are considered some of the most complex of financial equations. The advantages of discounted cash flow analyses for evaluating investment alternatives are (1) all cash flows of each investment are explicitly included in the analysis, and (2) the time value of money is specifically calculated. Discounted cash flow methods do have serious drawbacks, however. First, a discounted cash flow analysis has the appearance of being extremely accurate. This appearance is highly deceiving, however. Every number in the calculation is, at best, an estimate. The weighted cost of capital, the amounts, and the timings of cash flows cannot ever be known with certainty. Second, the calculation uses a single estimate for each projected cash flow. Although cash flows that will occur soon may be reasonably accurately estimated, the longer the period of time over which projections are made, the greater the uncertainty of each estimate. Third, making good estimates of future cash flows requires considerable expertise and effort. Few owners of small businesses have either the time or the resources to do the necessary projections. All in all, discounted cash flow analyses are theoretically sound but are empirically highly problematic.

CHAPTER 16 Small Business Protection: Risk Management and Insurance Page 579 LEARNING OBJECTIVES After you complete this chapter, you will be able to: LO 16-1 Explain the meaning and nature of business risk. LO 16-2 Describe the specific types of risks associated with different aspects of business operations. LO 16-3 Describe techniques to manage risks to stay within your level of risk tolerance. LO 16-4 Explain how insurance can be used to manage business risk. LO 16-5 Describe techniques for sharing risk with other businesses and organizations. • Each month, thousands of business websites are targeted by cyber criminals. Many small business owners mistakenly believe that they won't be hit because, they reason, "my business is too small for crooks to mess with." The most common types of cyber attacks against businesses are phishing, ransomware, and formjacking. Symantec, a major supplier of anti-malware software, reported that in 2018 an average of 4,800 retail websites were compromised by formjacking code,1 and there were almost 121,000 ransomware attacks on small and medium-sized businesses.2 Suppose you were to find a message similar to the one shown here. What would you do? A ransomware notification window Mr.Nngk Phakayaem/iStock/Getty Images Focus on Small Business: The Threat to Small Business Computer Systems Cyber crime has become a big business in itself. Cybersecurity Ventures projects that the total cost worldwide will be on the order of $6 trillion (a 6 followed by 12 zeros!) in 2021.3 The same report states that 58 percent of all victims of cyber crime in 2018 were small businesses. As George Westermann stated in an article for Forbes magazine, "Your Business Is Never Too Small for a Cyber Attack."4 These numbers are alarming, but in fact they probably understate the real problem. Most small business victims of cyber crime do not report the attacks.5 So what happens when your business is hit with a ransomware attack? Although most affected businesses do not discuss their experiences with cyber attacks, a few have. Rick Snow, the owner of one such small business, Maine Indoor Karting, told his business's story in testimony before the U.S. House Small Business Committee.6 The hacking of Maine Indoor Karting began with an email alert that appeared to be from the company's bank. The email stated that there had been a suspicious online attempt to access the business account. The email contained instructions to follow an included link. The link opened a site that was identical to the format of the logon page for the bank. Snow clicked on the link and seeing the expected logon page, entered his account data as directed. Almost immediately, Snow realized that he had been duped. He went to his bank immediately, and with the bank's assistance closed the current account, created a new account, and ordered new checks and debit cards for the business. He stated that it cost about $250 and took three days for the new checks and new business debit cards to be received. It seemed that his prompt action had prevented a business

disaster. Then two weeks later, not long after he distributed the employee paychecks, he discovered that his business checking account balance was zero! Three separate wire transfers had been made from the account. Because the loss was discovered after banking hours, he had to wait a very anxious night before going to the bank to attempt to stop the wire transfers from paying. Snow was simultaneously unlucky and fabulously fortunate. He was able to prevent the wire transfers from being funded. However, once again he had to close his business account and go through the time-consuming and expensive process to set up a new account. Page 580 DISCUSSION QUESTIONS Why do you think that cyber criminals target small and medium-sized businesses more than large businesses? What could Snow have done to prevent this hacking attack? How do you suppose the cyber criminals obtained the information for the new bank account that allowed them to drain it of funds? Think of the business that you own or would like to own. How and to what extent would the theft of money be a threat to your business?

Risk in Small Business 16-1 Explain the meaning and nature of business risk. We have discussed financial risk that comes from your capital structure and investment risk caused by accepting or providing debt. Within the discussions of the management of cash, accounts receivable, inventory and other business assets we have discussed the issues of employee fraud and theft in its various forms. In this chapter we discuss other kinds of risk that small business owners face. For business owners, risk can be defined as being the probability that the future will not turn out as planned. Your business may be the target of a lawsuit. Regulatory changes and enforcement may cause you great losses. Floods, fires, earthquakes, tornados, all kind of natural disasters, in fact, can and do happen. While these things are not everyday occurrences, they do occur frequently and your business can suffer as a result. We all know that people vary widely in their response to risk. Some people will run with the bulls in Pamplona; others will not touch a calf in a petting zoo. As we pointed out in the previous chapter, business owners similarly differ in their response to business risk. Some seek risk, but most prefer to avoid risk to the extent possible. In academic terms, some business owners are risk seeking, although most small business owners are risk-averse. To the extent that small business owners are risk-averse, as part of every business decision they consider what they could lose. If they can't reduce the level of risk to where they're comfortable, then they make arrangements to either insure against future losses or to spread the risk among other people or businesses.

Thinking about Risk We have already defined business risk as the probability that the future state of the business will be less successful than planned, resulting in the loss of value of

business assets. No person enters a business for the purpose of losing money, but it can and does happen. The next quarter's business does not meet expectations. Investments go bad. Sales projections are not met. Products do not meet specifications. All of a sudden, investors find themselves the owners of assets that are worth much less than expected. The likelihood of this bleak outcome is the essence of business risk. Among the most commonly identified sources of risk are: Financial risk that is a result of choosing among sources and types of capital investment.7 Theft of business property. Nonpayment of debts owed to the business. Cyber attacks that disable the firm's computer system or copy sensitive business data. Changes in technology that render the business's product or service obsolete. Injuries and illnesses suffered by employees as a result of their employment. Injuries from accidents incurred by customers, vendors, and others while on business property. Page 581 Loss or harm incurred because of the use of the business's product or service. Natural events, such as storms, floods, fire, and earthquakes. Violation of any of the multitude of laws and regulations that apply to small business. Misbehavior by employees, In this chapter we will discuss these and other risks, although not in this order. Each discussion will include a description of the risk and a brief discussion of how an owner of a small business may control or lessen the negative effects of each.

Risks Associated with Specific Business Operations 16-2 Describe the specific types of risks associated with different aspects of business operations. There are three general types of events that cause business risk: (1) events related to the property of the business, (2) events related to personnel, and (3) events related to customers and others. Risks Related to the Property of the Business Every business owns things of value such as inventory, production machinery, reputation, skill, and experience. Many businesses own furniture, office equipment, vehicles, buildings, and land. Some businesses own valuable patents, copyrights, trademarks, or trade secrets. Each type of property involves specific forms of risk. Inventory can be stolen or spoiled or become obsolete. Cyber attacks can destroy critical computer resources. Hacking of databases can cause loss of the trust of customers, vendors, and employees. Production machinery can break down. Institutional skill and experience can be diminished or lost as key employees die, retire, quit, go to work for competitors, or start their own competing businesses. Furniture, office equipment, vehicles, and buildings can be damaged or destroyed by vandalism, accidents, fire, flood, or wind. Land may become contaminated by spills of hazardous materials or rendered unsafe by cave-ins or landslides. Patents may be infringed upon. Trademarks and brand names that are not properly protected may pass into the public domain. A trade secret may be disclosed. Events Related to Personnel There are three main types of risk related to events involving personnel: (1) theft, (2) violation of government regulations, and (3) loss of

key employees. Employee Theft Employee theft is a fact of life for almost all businesses. Theft by personnel may involve direct stealing of money or other assets of the business, or may be the conduct of an illegal act that is intended to provide personal benefit at a cost to the business. The most common form of employee theft is the pilfering of items of small value, such as office supplies and small hand tools, or actions such as making copies for their children to use at school or otherwise using company resources to make personal items. Thought of this way, some experts estimate that 95 percent of small businesses face at least some of this sort of loss annually.8 Losses of these types are usually insignificant in their effect on the financial results of your business. However, theft losses of cash and inventory can be of such magnitude that your business is significantly damaged or even fails.9 Violation of Government Regulations Violation of government regulations has become a source of significant business risk over the last 30 years. Regulation of the workplace has increased, resulting in employer violations that range from having an employee one time "forget" to use required safety equipment to failing to provide required accommodations for employees with disabilities to discrimination against a protected class (race, religion, color, national origin, age, disability, or gender). The cost of violating any of the many workplace regulations can range from as little as losing a few hours of your time completing paperwork, up to huge dollar fines and judicial awards. Page 582 Violation of some of the regulations is probably inevitable given the complex, ambiguous, and sometimes contradictory nature of the regulations. The federal rule-making agencies of which employees may run afoul are countless, including the U.S. Food and Drug Administration, the Environmental Protection Agency, the Securities Exchange Commission, the National Transportation Safety Board, the Federal Aviation Agency, the U.S. Coast Guard, and the Department of the Interior, to name only a few. In addition, most states have similar business-regulating agencies that promulgate rules that often conflict with federal standards. The Small Business Administration estimated in 2008 that small businesses that had fewer than 20 employees had to spend roughly $10,585 per employee per year to file and keep up with all the regulatory requirements. This rate was twice what large businesses had to spend.10 The study of the costs of regulation on small businesses, cited above, has not been repeated since its release in 2010. However, the National Small Business Association (NSBA) conducted an online survey between November 28, 2016 and January 10, 2017 of 1,000 small business owners. This survey found that the cost of regulation for the average startup was a staggering $83,019.23! The cost of regulation per employee is not reported. On the other hand, the study found that half of all businesses expend approximately $12,000 per year for direct and indirect costs of federal, state, and local regulation, combined.11 Although there are numerous government agencies that issue business regulations, small businesses mostly have trouble with the rules from only three agencies: the Internal Revenue Service, the Equal Employment Opportunity

Commission (EEOC), and the Occupational Safety and Health Administration (OSHA). The problems arise because each agency has rules that are so complex that compliance problems are almost a certainty, if enough aspects of the business are reviewed. For example, the Americans with Disabilities Act has rules that govern the furnishings, size, placement, and clear space of public toilets and those run to over four pages and include more than 10 architectural drawings to specify exact maximums and minimums to the inch. Any violation of any of the specific accessibility measurements can result in civil fines or litigation awards. We discuss the IRS and the problems of tax code compliance later in this chapter. The risk of noncompliance with OSHA and EEOC regulations is further increased by the continual growth in the scope of government regulations. For example, the Equal Employment Opportunity Commission's rule-making authority has grown constantly since the agency's start in 1964. At that time, EEOC established five protected classes: race, color, religion, sex, or national origin.12 Since then the authority of the EEOC has grown through the passage of (1) the Age Discrimination in Employment Act (ADEA) of 1967, (2) the Rehabilitation Act of 1973, (3) the Americans with Disabilities Act (ADA) of 1990, and (4) the Civil Rights Act of 1991, all of which grant additional rule-making and enforcement powers. The EEOC has made thousands of rules that are ambiguous and, at times, contradictory. Loss of Key Employees Loss of key employees is a particularly acute risk for small businesses. Because of the simple fact that there are only a few employees in a small business, invariably one person or a very few people are essential to the successful operation of the business. If such a key employee quits, retires, becomes disabled, or dies, the business faces a crisis. In many cases, the loss of a key employee has led to the bankruptcy and dissolution of the business. Competition from former employees is also a constant risk. Good employees who understand the business, who successfully sell products and services, and who are skilled at the operations of the business are often tempted to become competitors. This can happen several different ways. A key employee may be "hired away" by an existing competitor who offers a higher salary and greater perks. A key employee may start her or his own business, using the knowledge and skills gained from working in your business. Customers may offer to back a key employee to establish a competing business in order to obtain lower prices and greater negotiating leverage. Vendors may offer a key employee dealerships or exclusive sales territories in a bid to increase sales of their specific products. Page 583 This risk is especially acute in knowledge and service businesses, such as accounting practices, medical practices, barber and beauty shops, and restaurants. All of these businesses have relatively low barriers to entry for qualified people. Each type of business depends on personal relationships engendered with customers. When a key employee of a knowledge firm leaves, it is common for several customers to change to the new firm. Events Related to Customers and Others Although customers are, by definition, the "reason for being" of any

business, they also are the source of considerable business risk. In addition to customers, you are also at risk from vendors and even trespassers on your property. This risk from customers and others primarily arises from (1) injuries suffered while on business property and (2) injury or damage that is caused during the use of the business's products. Injuries suffered while on business property may or may not be your fault. People at times do stupid things, such as climb on shelves to get items that are "just out of reach." If the shelf collapses and dumps the customer onto the floor, you're going to pay twice: once for the broken shelf and spoiled merchandise, and once for the "pain and suffering" of the customer. A reasonable person might believe that the customer was responsible for his or her own acts and the business should not be liable. It is most unfortunate that juries are composed of "peers" and not of "reasonable persons." Injuries on business premises may also arise from the actions of trespassers. In many cases, a business has been held responsible for harm experienced by a trespasser, as well as harm inflicted by the trespasser on employees, customers, and vendors. An extreme example of this type of event is robbery and assault that occurs on business property. In many cases, injuries suffered by employees and customers at the hands of the criminals have been held to be the fault of the business. The rationale given has been that the business didn't provide good enough security. Again, the business pays twice: once when the robber steals money and other assets; again when the employees and customers are paid for pain and suffering caused by the robbery. Payment for injury or damage that occurs during the use of the business's products is referred to as product liability. The magnitude of losses resulting from product liability claims has increased greatly in recent years with an increase in class action lawsuits. This is an issue that you must take very seriously if you are a manufacturer. Although individual customers usually get very little money from class action suits, the lawyers who pursue them often receive payments of millions of dollars, as occurred in the case of asbestos producers and tobacco companies. Certainly, the smaller your firm is, the less exposure you have to class action product liability suits. This is true for two reasons: A small business has fewer customers who can claim harm, and a small business does not have the "deep pockets" of cash and other assets that can be raided by rapacious law firms. • Retailers can be held responsible for damages caused by goods that have been tampered with and placed on the store's shelves. Constant vigilance is required to ensure that inventory is free of any impairment. Wavebreakmedia/Shutterstock Page 584 Individual lawsuits may also be filed when a single user claims to have been harmed by the product. Such lawsuits are actually more common than class action suits. Although the amount paid in settlement is usually a tiny fraction of that of a class action suit, a manufacturer must still take the issue very seriously. In the 1970s a rash of individual lawsuits against manufacturers of small (under 12,000 pounds gross weight) airplanes resulted in the demise of the industry. Many small businesses that either made small

airplanes or made parts and subassemblies for airplanes were forced into bankruptcy. The production of small airplanes did not resume in the United States until Congress passed a law that limited the exposure of manufacturers to product liability suits.13

Managing Risks 16-3 Describe techniques to manage risks to stay within your level of risk tolerance. Although none of the risks discussed can be completely avoided, there are strategies you can use to minimize the likelihood and magnitude of losses. The best strategy is to develop a business environment that minimizes (1) the probability of the event occurring and (2) the amount of loss that can be experienced if the event does occur. You do this by (1) making specific plans for and arrangements to deal with foreseeable events, (2) creating and enforcing an appropriate code of conduct for yourself and all employees, (3) ensuring that valuable assets are physically secure, and (4) actively working to get rid of any physical hazards in your workplace. You should develop disaster plans for events that are unlikely, but that have a finite probability of happening. For example, those businesses that are located in the Missouri and Mississippi River flood plains near St. Louis have a very real probability of significant flooding in any year. Prudent business management for these firms includes creating a plan of action to remove valuable assets to high ground, making plans for temporary business locations, and creating provisions for subcontracting work to

minimize the effect of business interruption from the inevitable flood. Disaster planning like this can also work to minimize the effects of fires, storms, and earthquakes on business operations. A written code of ethics and business conduct (like those discussed in Chapter 3) make explicit what you expect of your employees. By obtaining employee acceptance of the code, you can create an environment in which peer pressure works to discourage inappropriate behavior and works to encourage desired behavior. To be effective it is essential that you abide by the code, leading your employees by your example of integrity and honesty. Valuable assets of the business must be kept in secure areas. When valuable assets must be used, access to them should be carefully controlled and monitored by management. Only those employees who have a business need should be allowed access to valuable assets at any time. Working proactively to ensure that your physical place of business is (1) free of potential hazards and (2) secure from intruders to prevent on-premises injuries and violations of EEOC or OSHA rules. It is easier and much less expensive to anticipate and prevent potential lawsuits than it is to defend yourself against them once they have been filed. Managing Risk to Tangible Property Protecting Your Business from Theft Protection from theft of business property also depends on the type of property held. Although land is not subject to being physically stolen, you can lose your property rights through a process called adverse possession. Adverse possession occurs when the owner of real property does not enforce property rights and allows a nonowner to use the property as if it were his or her own. Just as land cannot be stolen, buildings and large equipment for which there is no ready market are similarly free from theft because of their physical nature. The property most at risk is cash and small items of high value that can be quickly and easily sold. You need to do two things to protect yourself from theft: (1) physically protect your property, and (2) develop and enforce rules that prevent the employee responsible for the asset from being able to account for the asset. This is called separation of duties, and is a core management technique to safeguard money and other valuable assets of a business.14 Page 585 Although separation of duties will keep any single employee from stealing, nothing will keep two or more employees who decide to cooperate from stealing company property. Employee collusion is the source of the largest amount of employee theft.15 When employees agree to defraud, “one lies, and the other swears to it!” This is the way that common frauds are perpetrated, such as sales of nonexistent advertising, payments to nonexistent vendors, and purchases of inventory and supplies from a vendor who will pay a kickback to the dishonest employees. As Figure 16.1 shows, employees account for the second-largest source of business theft in retail businesses, following shoplifting. The largest source of theft in businesses that do not have retail outlets, such as construction, manufacturing, government, warehousing, is theft by employees.16 FIGURE 16.1Source of Theft in Retail Businesses Source: Richard C. Hollinger and Amanda Adams, 2016 National Retail Security Survey, University of Florida,

2016, p. 9. Managing risk to the tangible properties of your business depends on the nature of the property. Land and buildings aren't subject to theft, but they can be damaged or destroyed by a variety of events. Equipment can be stolen, vandalized, or allowed to fall into disrepair. Small items of high value may be stolen by employees, customers, vendors, or others. The specific measures to control for each type of risk are particular to the specific asset at risk. Managing Risk to Inventories Because inventories are likely to be the most valuable asset of your small business, it's protection and management deserves a close look. Your small business can experience loss of asset value of inventory in several ways; As discussed in Chapters 13 and 15, inventory is subject to theft. Inventory is often lost—not stolen, not gone, it just can't be found. Inventory is frequently damaged during storage or while being moved. Inventory can spoil—either physically, as with food products, or technologically, as happened with personal digital assistants. Theft is the single greatest cause of inventory loss. Inventory is stolen by employees, shoplifters, and burglars. It is extremely difficult to stop any of these three sources of loss. But you can take steps that should greatly reduce the risk. Reducing theft by employees is accomplished by first educating them in both the cost to the business and the personal cost to the employee of getting caught. Other means of control include being very careful in whom you hire; having a documented policy for dealing with employees who steal; and observing employees especially around the time of closing and inside any break areas. Reducing shoplifting requires greater efforts than those used to reduce employee theft. Shoplifters usually are relatively experienced thieves. They often "case" a business before performing any theft. They identify surveillance cameras; find weak points in your security; and map out paths in order to be able to escape if detected. Reasonable approaches to reducing shoplifting include: Having security personnel in uniform stationed near exits at peak times and around closing time. Carefully monitoring any customers who are wearing bulky clothing such as long raincoats, or who are carrying large handbags or backpacks, and those who are pushing strollers through your business. Extensively training checkout clerks to recognize inventory items to allow them to detect label switching. Installing and using strategically placed monitoring devices such as video cameras. Preventing burglary is most difficult of all. The very things that make a retail location desirable, such as glass doors and close parking, also create opportunity for burglars. Determined thieves do not hesitate to break glass doors. And organized thieves will certainly have a getaway vehicle at hand. The best approach is to ensure that your location has frequent but not regularly spaced drive-bys by police. If your business is large enough, you might consider hiring private security personnel. Entrances, doors, windows, and access hatches to the roof should all be alarmed. The alarm system should automatically call into local police. Page 586 Managing Risk to Buildings and Land Protection from fire for buildings may be obtained through such measures as installing smoke alarms and sprinkler systems and having a fire

plug nearby. Other control measures include removing flammable ground cover such as brush, leaves, and fallen branches from proximity to all buildings. Protection from flood can, first and foremost, be accomplished by not locating on a flood plain. Although this seems like a commonsense directive, unimaginable numbers of businesses are built on flood plains, and new construction continues. In 1993, the entire flood plain of the Missouri and Mississippi Rivers in the St. Louis area, from Kansas City on the west, Hannibal, Missouri, on the north, to the confluence of the Mississippi and Ohio Rivers on the south, was inundated with water up to 50 feet deep. Hundreds of businesses in the areas around St. Louis and St. Charles, Missouri, were destroyed. Despite this experience and despite a second round of severe flooding in 1994, the flood plain of the Missouri River from St. Louis upstream for over 30 miles is the site of extensive building. It is only a matter of time until the river again rises, the levees fail, and hundreds of businesses are flooded with tens of feet of muddy water. Flooding also occurs for reasons other than streams and rivers overflowing their banks. Floods often occur from breaks in water supply pipes, from accidental activation of fire suppression sprinklers, from blockages in storm and sanitary sewers, and from runoff of water that is sprayed on burning buildings. You may protect yourself from these hazards through performing regular inspection and maintenance of the plumbing and fire suppression systems of your buildings. SMALL BUSINESS INSIGHT The Medicine Shoppe in Joplin, Missouri On May 22, 2011, a massive multiple-vortex tornado tore through the midwestern town of Joplin, Missouri. Among the hundreds of business locations destroyed was the Medicine Shoppe, owned by David and Sherree Starrett. All that they could salvage from the wreckage was the safe that held controlled drugs, some computer equipment, and a few filing cabinets. All their pharmacy files were destroyed by being submerged in water. The Starretts, however, did not give up. Only two days after the storm they managed to lease an undamaged storefront. They moved in the few things salvaged from the storm. With fixtures donated by other Medicine Shoppe owners the Starretts set up for business. The U.S. Drug Enforcement Administration issued a new provider number and the state of Missouri provided a disaster waiver. They received an expedited shipment of drugs and medicines from their supplier. On May 28, six days after the storm, the Starretts reopened for business in their new location. Courtesy of David and Sherree Starrett, owners of The Medicine Shoppe of Joplin David and Sherree Starrett recovered from a disaster of a magnititude that few will ever experience. Their resilience, determination, and hard work (along with business insurance and an effective business network) enabled them to literally “rise from the ashes.”17 Protection from storms can be accomplished by rigorously enforcing building standards concerning attachment of buildings to foundations, types and construction of roofs, and by choice of building materials and construction techniques. The specifics of storm proofing a building depends on the geographic location of the building. Specific storm hazards, wild fire, wind, flood, or

snow load are determined primarily by geography. Each geographic area has its own risk. California has frequent floods and mud slides. The mountains of the West are subject to winter snows, spring floods, and summer wild fires. The Gulf and eastern shores south of New York are subject to frequent hurricanes. The Midwest, especially Oklahoma, Kansas, Nebraska, Iowa, Missouri, Illinois, Indiana, and Ohio, experiences thousands of tornadoes every year. On May 22, 2011, a category 5 tornado struck Joplin, Missouri. The storm destroyed homes and businesses in a path nearly 1 mile wide and fully 6 miles long. Total damage has been estimated to be $3 billion. The Small Business Insight relates how one business owner was affected by a force 5 tornado in Joplin, Missouri. The upper Midwest, including northern Ohio, western Pennsylvania, and western New York, is annually buried under tons of snow. Specific building techniques to withstand tornado winds are useless against five feet of snow on the roof, just as structure to withstand snow loading is useless when the entire building slides down the hillside. Managing Risk to Tools, Equipment, Inventory, and Other Portable Items Managing risks to tools, equipment, inventory, and other physical assets is largely a function of developing and enforcing appropriate business policies and procedures. Tools and equipment should be maintained on a schedule that prevents serious wear or damage. Frequent inspections should be made to ensure that any problem is detected as soon as possible, allowing repairs to be made in a systematic manner. Physical assets that can be stolen must be kept in locked storage areas when not in use. Small items of high value should not only be kept locked away, but a procedure should be rigidly enforced that requires employees to sign for removing them from storage. A manager's signature should be required to confirm that the item has been returned to the proper storage when it's no longer needed. Managing Risk to Computers and Data One of the riskiest areas of business today involves computers, especially those connected to the Internet. Today hackers use programs that seek out unprotected computers connected to the Internet, and once identified, take them over through spyware programs. Some spyware may use your computer to send out advertising spam on behalf of the hacker's clients. Other spyware lets the hacker actually see and even steal data on your PC, including passwords and credit card information. If you have your business data on the computer, your customer lists (including their credit card numbers and identifying information) can get hacked. Page 587 The best way to think of protecting your PC is a lot like how you think about protecting your car. Locking the door and taking the keys with you prevents the vast majority of car thefts, those done by thieves who find keys in the ignition or open an unlocked door and hot-wire a car. What is the equivalent for a PC? A firewall: Firewalls are programs or pieces of equipment called routers that serve as a barrier between your PC and the Internet. An antivirus program: Viruses are malicious programs designed to damage PCs. Antivirus software programs prevent, detect, and remove malware from your PC. Antispyware programs: Spyware are programs designed to report on

your keystrokes or data, or give remote control of your PC to others. Antispyware software programs prevent, detect, and remove spyware programs from your PC. Page 588 Windows 10 operating system is delivered with a full set of security features, including a firewall and virus detection and removal. All of the Windows features are configurable. However, configuring the defense apps in Windows can be quite intimidating. You might want to consider hiring a security specialist to set up your business system. Microsoft publishes an extensive set of documentation for the threat protection features of Windows 10.18 The simplest answer is to buy an all-in-one collection of security programs like Norton Internet Security or ZoneAlarm Internet Security Suite. You can often find good deals on these packages (usually via rebates) at discounters like Staples or Office Depot. The advantage of these programs is that all their installation and updating is done at the same time, so it is easier to maintain. The least expensive alternative is to find a free stand-alone program. However, to be ethical in protecting your computer, you need to select programs that are free for use in business (profit-making) situations. Some great programs, like the free version of the ZoneAlarm firewall or AVG's free antivirus, are not free for business use. One company that makes a complete set of programs (firewall, antispyware, and antivirus) is Comodo (www.comodo.com). These programs can be used by businesses for free. The disadvantage of stand-alone programs is that each needs to be installed and updated individually (although many programs can be set to update themselves automatically). Going back to our car thief analogy, if professional car thieves set out to steal your car, the lock-and-take-keys approach will not deter them. Here you step up to a higher level of deterrence such as the use of an alarm system. The same is true for determined hackers. You may not be able to stop them from getting around a firewall or antispyware program, but you can protect your data by encrypting it. Encryption is the recoding of your data so that only people who know the unlocking code can see the data correctly. Windows comes with a way to encrypt data, but its approach does not let you move or share an encrypted file. A better approach is to use an encryption program like AxCrypt (http://axcrypt.sourceforge.net/) or Inferno (http://inferno.sourceforge.net), both of which are free. One caution, though: If you encrypt a file, make sure you use a password for your encryption that you can easily recall. Once encrypted, if you lose the password you lose the ability to decode the file! That brings us to the final issue in Internet security—the human element. Many people reading about the problem of password loss probably think, "I'll write down my password." The problem is that most data theft comes from inside businesses. Writing down your password and leaving it where others can see it is the equivalent of leaving your keys in the car. Even with all the programs running, a computer can be secure only if the people using it practice safe surfing—using complex passwords, changing them frequently, and keeping passwords to themselves (or written down and hidden away from others); not opening downloads from unknown, unexpected, or

untrustworthy sources; and having your PC set to lock itself after a few minutes of inactivity (as when you leave your desk) so others cannot use your computer when you are not there. Remember the car analogy? If your car is broken it is as useless as when it is stolen. That brings us to one other type of concern you should have about your data—preserving it. We have all heard the line "my computer crashed and took my project." As your contact list in Outlook or your customer database or inventory and accounting records become more important to your business, the cost of a loss of data to your business increases. The cost is not just lost revenues—since you cannot charge people if you lost the information on what they owe—it is also lost time. Imagine how long it would take to recreate your complete list of contacts. Now repeat that for all the data files generated by your business. The result is frightening. Even more threatening is the recent increase in the use of ransomware. This is a computer program that encrypts all the data on your computer with an unknown key. You then receive a ransom demand that you pay an amount to an anonymous account, often through Bitcoin, by a certain time or all your computer contents will be erased. The solution is having multiple backups. These days it is easier than you might expect. If you have Internet access, you can use Mozy (www.mozy.com), which gives you 2 gigabytes of backup space for free and unlimited space for $50 a year. Its software can be set up for automated backup of key files when you are online. You can find other services by Googling "online backup." Many offer a mix of free and for-fee services, including Mozy, Cobian, iDrive, and many others. Each provider offers differing amounts of storage and various levels of security and features. The basic concept of online, cloud-based backup is shown in Figure 16.2, which graphically details this process. Page 589 Another alternative is to use an external hard drive that gets its connection and power through a USB cable. Get an external drive that comes with backup software. With these drives, you plug it in once a day to your PC and back up your files. Then disconnect the hard drive. This protects your data from electrical storms or other failures of your PC's power system or motherboard. If the PC does not work, you still have your current (or at worst, day-old) data to work with, and your business can operate almost normally from another computer with the right software. FIGURE 16.2How Online Backup Systems Work Today the biggest risk to most businesses comes when using computers, and as more and more of your business's most valuable information is in the files on your computer, the importance of protecting it grows. The basics are relatively simple, but the quality of the protection depends on following through on the basics, and backing them up with behaviors that don't undermine your other efforts to secure your computer and data. Managing Risk to Intangible Property Intellectual property rights comprise the legal rights to use unique features of products or services that provide competitive advantage. The rights to use unique features may be legally protected in several ways, including establishing precedence, keeping the process secret, filing for a copyright or trademark, or obtaining a

patent. However, if the feature is successful, competitors will eventually find a way to either lessen its competitive advantage or even to render it worthless. Page 590 The problem with legal protection methods for intellectual property is that there is no government agency that will assist you, as the owner of a small business, in maintaining your legal rights. Copyrights, trademarks, and patents do not automatically provide any protection. Anyone may copy any of these items at any time. If, and only if, the holder of the intellectual property rights promptly reacts to infringement by making written objections to any and all infractions, can the legal rights be maintained. In other words, holding legal rights to intellectual property provides the owner solely with grounds to pursue lawsuits against infringement. Immediately upon learning of any infringement, a certified letter should be sent to the suspected violator, clearly specifying the nature of the intellectual property rights held and demanding an immediate cease and desist of the infringement. If the infringement continues, a lawsuit is your only recourse. If you do nothing, you get nothing, as was the case for Harvey Ball, the inventor of the smiley face (see the Small Business Insight). SMALL BUSINESS INSIGHT Harvey Ball and the Smiley Face19 • How could Harvey Ball have profited from his design? How can a citizen of France register a design created by an American artist? Paul Connors/AP Images You see them everywhere—yellow circles with a smiling caricature on them. The amazing thing is that as much of a cultural icon as the smiley face is, its inventor never got any money for it. Harvey Ball was a freelance designer working at State Farm Mutual Insurance in Worcester, Massachusetts, in 1963. He was asked if he could provide a design to boost morale after a merger had left some people upset. He designed the circle and smile, and he added the eyes so disgruntled employees couldn't easily turn the smile into a frown by wearing the button upside down. Harvey was paid $45. He did not trademark it (which, as the designer, he could have done), nor did State Farm. State Farm gave them away—first to the employees, but then to customers who clamored for them. As the buttons spread, the smiley face got copied and copied. Franklin Loufrani of France registered the design in 1971 in over 80 countries and did receive royalties, and eventually Harvey registered a version with his name on it. In the end, Loufrani made the money from the design, while Harvey never got anything else for it, except a lot of satisfaction. As he said, "Never in the history of mankind or art has any single piece of art gotten such widespread favor, pleasure, enjoyment, and nothing has ever been so simply done and so easily understood in art." Guarding against obsolescence is best accomplished by maintaining a diligent watch on business intelligence concerning developments within the industry. If you own a small business that depends on valuable intellectual property, you should regularly read the journals and magazines that are unique to your industry. You also should subscribe to clipping services, such as those provided by Westlaw (www.westlaw.com) and Dow Jones (www.dowjones.com). Additionally, you should carefully listen to customers and vendors

for information concerning developments in your industry. Although it sounds paranoid, the truth is that intellectual property is constantly under attack. Very smart people are diligently working to develop better products and processes from which they will gain wealth at your expense if you move too slowly reacting to threats to your business. Page 591 Managing Risk Resulting from Events Involving Personnel Managing risks created by personnel starts with the hiring process, as is discussed in Chapter 18. Efforts must be made to identify people of high moral character and ethical standards. Owners of small businesses are well advised to use employment services to screen potential employees. Employment services can perform background checks, administer drug tests, and conduct psychological tests that are designed to measure an individual's level of integrity. However, no hiring process is 100 percent foolproof. For that matter, no human being is 100 percent reliable. Ultimately, no one is able to withstand all temptation, regardless of ethical standards. Because all people are fallible, owners of small businesses have an obligation to employees to make theft difficult and honesty easy and rewarding. If you tempt employees with easy access to valuable property and with little likelihood of theft being detected, sooner or later most employees will succumb to temptation in ways great or small. The Association of Certified Fraud Examiners found in a 2016 study20 that the most costly employee frauds compared to total business assets occur in businesses with fewer than 100 employees. The median loss to these businesses was a staggering (for the owner of a small business) $180,000. This finding is interesting for two reasons: (1) The vast majority of small businesses have fewer than 100 employees, and (2) it contradicts the belief that people do not steal from people they know. Internal control is the primary method of ensuring honesty in employees. Internal control is a matter of establishing policies and procedures that work to make dishonesty difficult and honesty easy. The most basic technique of internal control is to separate the duties of maintaining the security of assets from the duties of maintaining records of those assets. While internal control will reduce the opportunity for employee fraud, it is not sufficient to disclose frauds that are currently taking place. The 2016 Global Fraud Study21 found that internal controls were responsible for disclosing only a little more than 1 percent of the frauds that were detected during the study period. As Figure 16.3 shows, nearly 40 percent of all frauds that were detected were found because of a tip. About one-sixth of frauds were detected by an internal audit, and one-seventh were found by management review. FIGURE 16.3Percentage of Frauds by Method of Detection Source: Association of Certified Fraud Examiners, 2016 Report to the Nations on Occupational Fraud and Abuse, 2016. Separation of duties is most important for intangible assets—those things of value that have no physical "reality," such as money, accounts receivable, patents, and licensing agreements. Consider the problems of keeping money secure. Money exists primarily as an entry in the accounting records of your bank. The employee who has authority to write

checks and to make deposits has free access to the things related to embezzlement. All that person needs to do is write a check made payable to a fake entity, and then cash the check and pocket the money. If one employee both writes checks and keeps accounts receivable records, theft is even easier to commit and harder to detect. Page 592 Such simple frauds can amount to huge amounts of money over time. The 2016 Report to the Nations on Occupational Fraud and Abuse reports on 2,410 cases of fraud that combined resulted in over $6.3 billion in losses to the defrauded companies. Nearly 93 percent of the frauds detected involved misappropriation of business assets. Fewer than one-fourth of those involved assets other than cash. Fraudulent disbursements of cash comprise 74 percent of all misappropriations with an average loss to a business in the United States of $120,000.22 The greatest threat of loss from employee dishonesty occurs when two or more employees collude: agree together to defraud your business. Employee collusion is both very common and very difficult to detect. The most common form of employee collusion is the theft of cash and inventory. Cash is most usually stolen by making false disbursements. Inventory is stolen through false employee sales. Many small businesses allow employees to purchase inventory at cost for personal use. When two employees agree to steal, one purchases merchandise from the other. The employee who is “selling” records the sale as being less expensive items than what are actually being bought. Securing valuable property is a commonsense, but often overlooked, method of keeping honest employees honest. If your business involves small items of high value, such as precision tools, jewelry, laptop computers, data projectors, computer chips, gold, platinum, and so on, those items should be kept locked in secure areas except when being used. Employees who use such items should be required to sign for removing them from storage and obtain a manager’s signature when the item is returned to storage. All items of high sensitivity, such as trade secrets, formulas, and employee and customer records, should be protected with locks, access cards, and passwords. Risk from loss of key personnel and former employees setting up competition against your business can be managed through the contracting process. When a key employee is identified, an employment contract should be negotiated. The contract should include provisions that (1) limit the employee’s freedom to go into competition, (2) contain the employee’s specific promise not to disclose sensitive or secret information, and (3) offer rewards for providing adequate termination notice and a smooth transition for replacements. Additional protection from harm resulting from loss of key employees can be obtained by cross-training among employees. Although any specific employee may not be able to be directly replaced, the needed skills and talents can certainly be found within a group of employees. If employees are cross-trained, the loss of one individual can be alleviated by drawing on the diverse abilities of other employees. Finally, any truly key employee, including yourself as the owner of a small business, should be actively grooming his or her own replacement

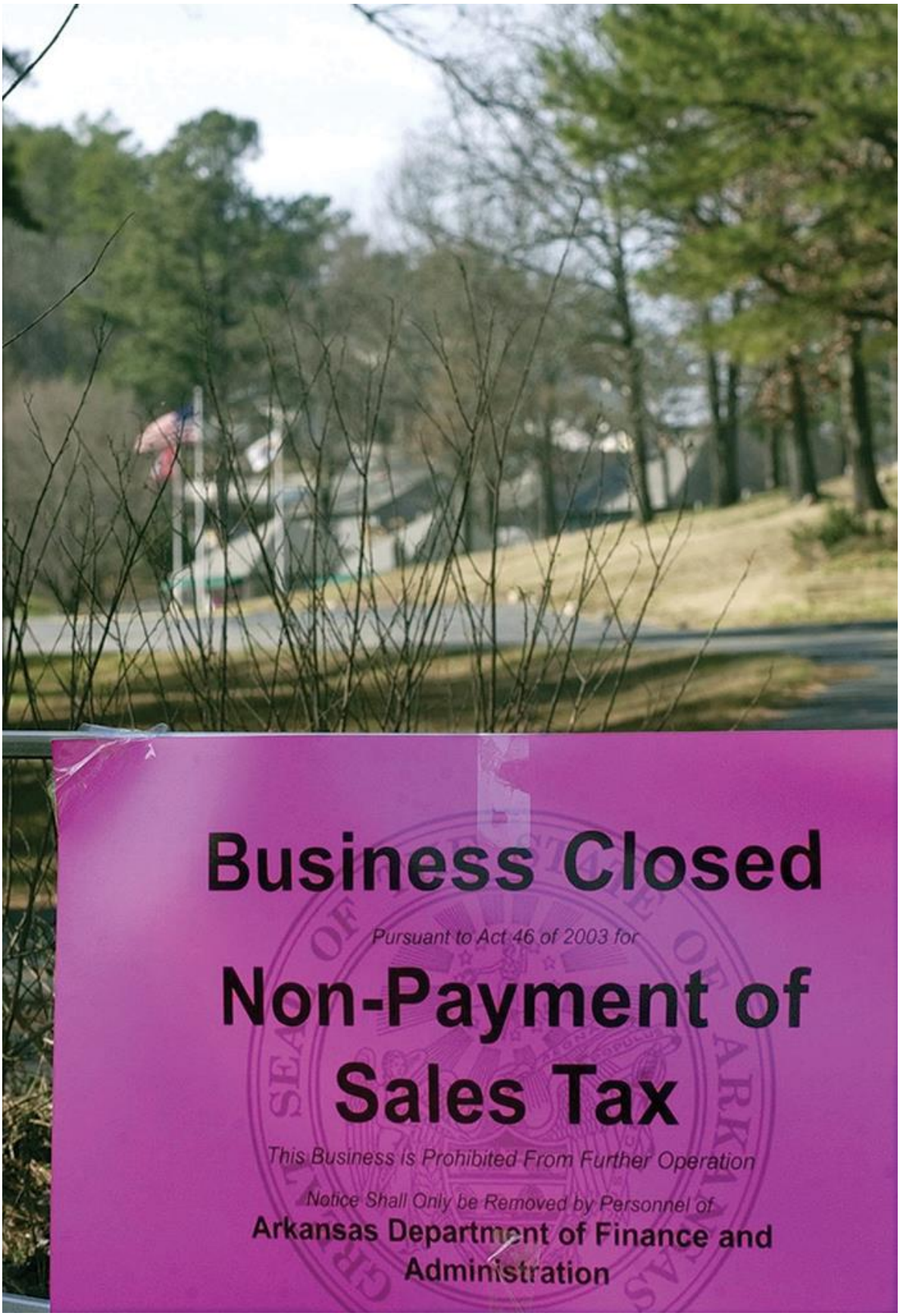
to be able to step in on an instant's notice. Managing Risk from Violations of Tax Regulations It is a rare business that has never run afoul of a taxing agency. Small businesses are subject to taxation from cities, counties, states, and the U.S. government. The tax codes of all levels of government have become ever more complex, placing more and more responsibility on businesses for calculating, collecting, and paying various taxes. Taxes imposed on small business include franchise or corporation taxes, income taxes, employee taxes, sales and use taxes, and property taxes. The regulations that relate to all these taxes are so voluminous that it is impossible for any individual to know them all. In fact, the regulations are so complex that even the enforcement personnel of various taxing agencies are often ignorant of the myriad details of the code and regulations. Perhaps then it is not surprising that the government estimates that 15 percent of taxpaying businesses are not complying with the rules.23 • You won't go to jail for failure to pay your creditors, but you will spend some time behind bars if you do not pay your taxes. Keep your business in financial shape by making timely payment of taxes your first priority. Danny Johnston/AP Images As is related in the Small Business Insight, you can often be fined, even when you have good records and a professional opinion that you are meeting all relevant tax provisions. Although there is no magic formula that will prevent financial loss that arises from being the subject of a tax audit, there are some fairly simple techniques that will work together to limit your exposure. First, you must keep complete, accurate accounting records. If you use a computerized accounting system, be certain that the audit trail function is enabled. Control access to the functions of the accounting system by issuing and regularly changing passwords. File all source documents, such as purchase orders, bills of lading, requisitions, and invoices, in a systematic manner that will provide easy access if you are called on to "prove" any transaction. Carefully document all cash transactions. Ensure that employees properly enter all cash sales into the cash register, and then reconcile the cash register tape to the cash register contents every day. Insist on receiving a signed receipt from vendors when you pay in cash. Page 593 The simple fact is that many, if not most, owners of small businesses "skim" in ways small and large by taking cash from their businesses before it is recorded as a revenue. Many owners also inappropriately charge personal expenses to the business as a way of extracting money without paying income taxes. Tax agents know these facts very well. As a result, when your business is audited the agent will assume that you have understated your revenues and overstated your deductible expenses. It is your responsibility to prove that you have not. Second, you should establish a relationship with both an accountant and a lawyer who are expert in tax issues. Although attestation by an accountant or lawyer is not evidence of lack of criminal activity (think Enron), an accountant or lawyer whose practice comprises issues of small business taxation will most likely do a much better job of representing you than you can ever do for yourself. Third, and most important, make paying your taxes your first

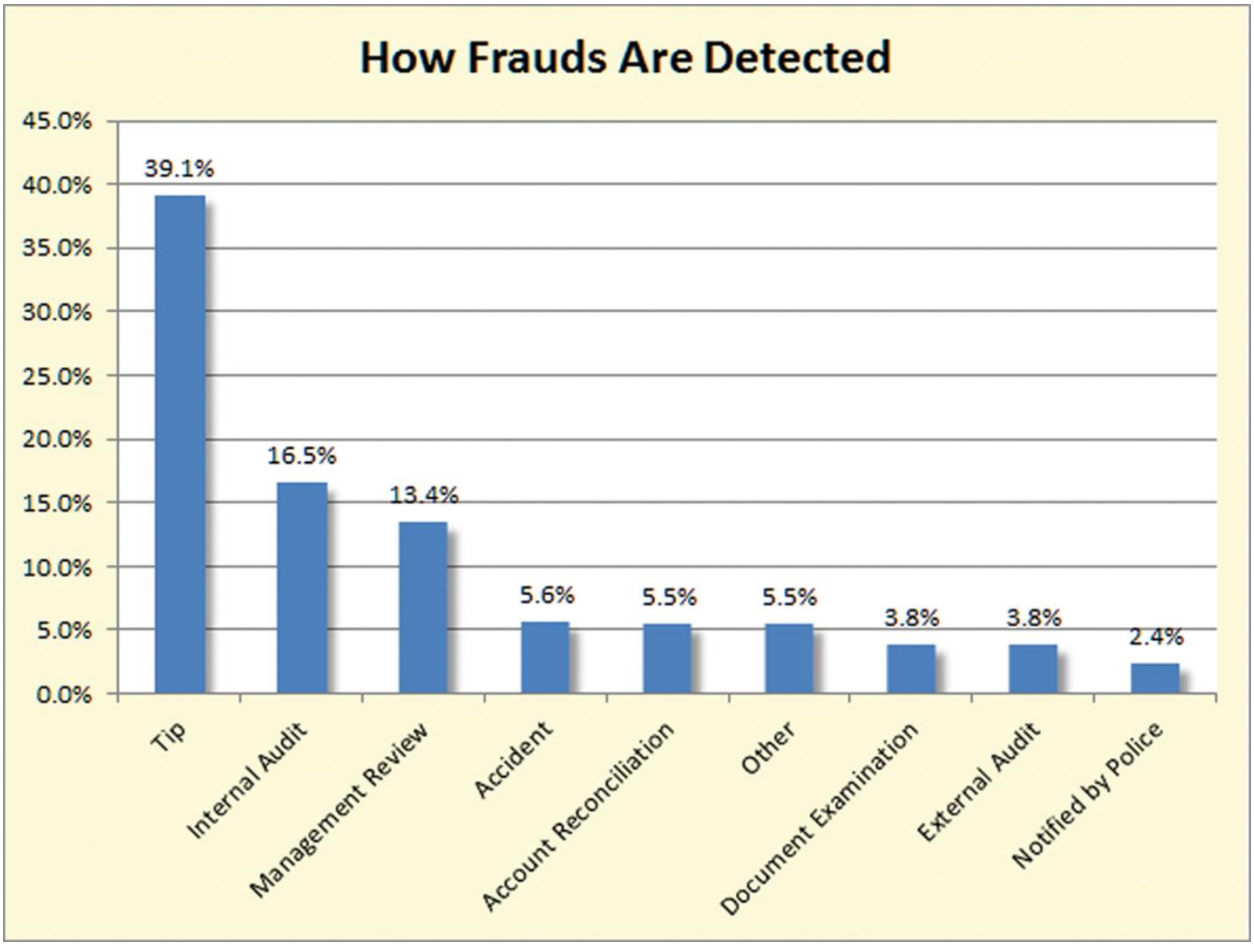
financial priority. The temptation to “borrow” from tax money is at times overwhelming, especially when you are being hounded by creditors for payment. Do not give in to this temptation. You can go to prison for not paying employee withholdings, for not paying sales taxes when they are due, for not paying your income taxes. If you do not pay your creditors, your credit rating will suffer. Your business may fail, but you won’t go to jail for not paying your bills. SMALL BUSINESS INSIGHT When Careful Planning and Preparation Aren’t Enough “Neither Rex nor I expected any problems when we found out that the Texas Sales Tax Commission was going to conduct an audit,” said Jay Hall. Rex said, “When the auditor came, we set up a desk for him. We kept him in coffee and gave him every record he requested. He worked for about three days checking through the last five years of our business.” “We were cool with it. After all, we have always kept our taxes squeaky clean. We knew that we had nothing to worry about.” “Little did we know,” said Jay. Rex Stone and Jay Hall are the owners and managers of Rex Stone Associates. Their business comprises planning, producing, and managing events, primarily in the San Antonio, Texas, area. They have a highly diverse client list, including businesses, unions, academic associations, and church groups. In the last few years they have conducted training sessions, provided trail rides and chuck wagon dinners, conducted motor tours of the Hill Country, and put on numerous balls, dances, and hops for their clients. “We were stunned when he told us that we owed the state over $125,000 in unpaid taxes, penalties, and accumulated interest. It just couldn’t be so!,” said Jay. Rex continued, “When he left, we immediately called our lawyer. The issue boiled down to taxes on the services of bands and combos we had furnished for events. The auditor claimed that we had to collect sales tax on the amount that we charged our client for the music group.” “The problem was,” Jay said, “we had already gotten an opinion from the Tax Commission that held that if we did not sell tickets to the event, no sales tax was due. In our business, we never sell tickets. We charge our client a fixed bid price, and only members and guests of the client group attend. Thus, no tax was due, and we had never collected for any music group.” “It took a year and cost us over $24,000 in legal fees, but finally we got a ruling that we had complied with Texas law. We did not owe the tax.” “Of course,” Rex said, “we were out the twenty-four thousand. But you know, it could have been a lot worse.” Page 594 Managing Risk from Employee Violation of Government Regulations Reducing risk from events involving employees who violate business regulations is best accomplished through a proactive program of training and enforcing appropriate policies and procedures. The courts have consistently ruled that it is the responsibility of the employer to police employee compliance with regulations. Ignorance of either the regulations or of employee violation of regulations is not a defense against administrative action. You are financially responsible for employee violations, intentional or inadvertent. Those few cases where the employer has been held harmless all involve employers who (1) have a written policy provided to each employee, (2) have

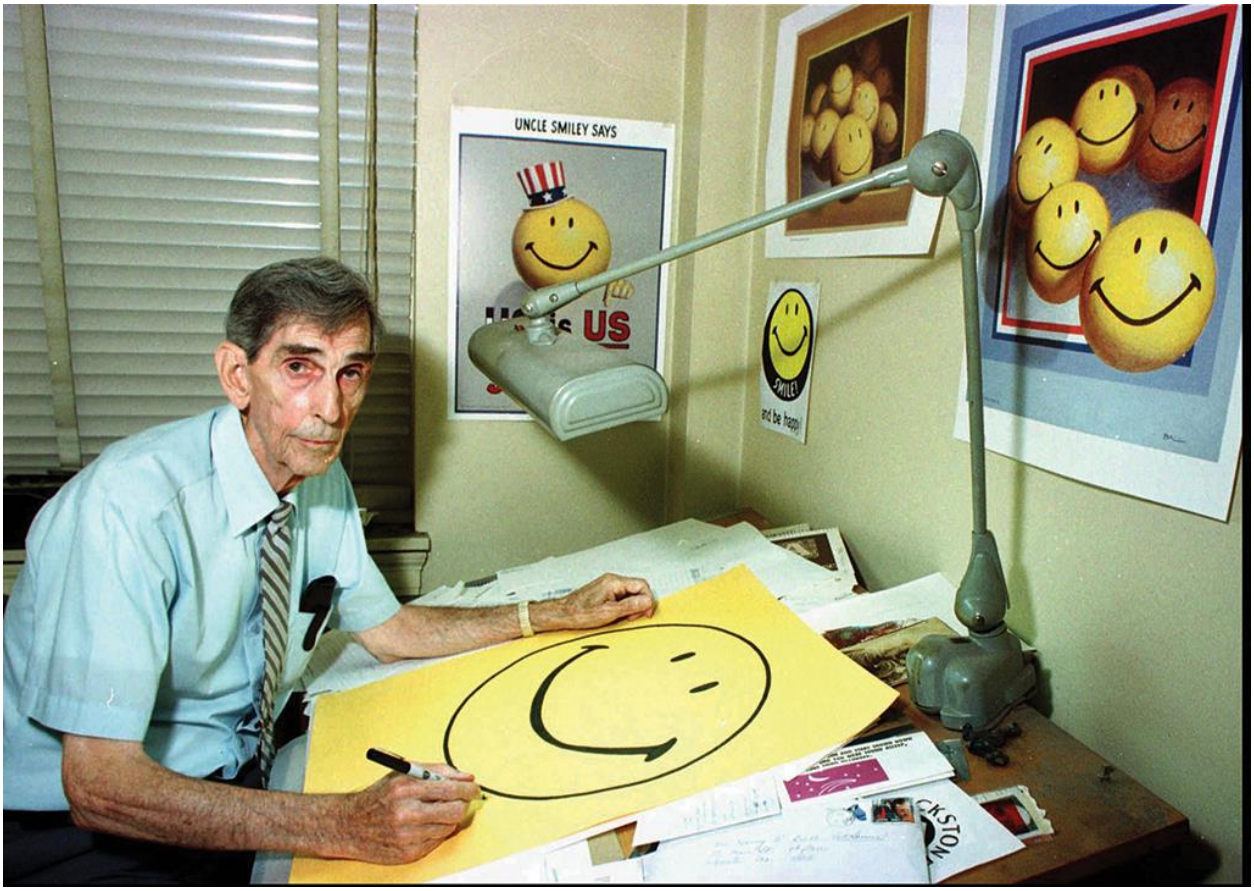
conducted training of managers and employees concerning those policies, and (3) have immediately and consistently acted on receipt of any complaint. Risks from violating the requirements of Equal Employment Opportunity Commission are best managed, as with risks from violations of any government regulation, by the owners being proactive: Know the EEOC rules that apply to your business. Obtain assistance from experts in EEOC regulations to assess the level of your compliance. Establish policies and procedures designed to prevent violations. Educate and train employees to know the policies and procedures and to understand the importance of following them explicitly. Enforce the policies and procedures by immediately dealing in a systematic manner with any employee complaint. Knowing the EEOC rules is a daunting task for any business owner. As stated earlier, the rules are voluminous, ambiguous, and arcane. There are, however, many sources of information that are written to be easily understood. Most such third-party information is provided by industry associations, and thus is usually specifically written for the problems you are most likely to encounter. Assistance can be obtained from experts in several different ways. One source that is often overlooked is the employment agency that you use to screen applicants. Employment agencies must be highly knowledgeable of the EEOC rules in order to remain in business. Often such agencies can provide sample policy manuals and advice concerning compliance. Other sources of expert help include SCORE (www.score.org) and the EEOC itself. The EEOC maintains a website that contains myriad resources for small business owners. The commission also publishes numerous books and pamphlets that are available from www.EEOC.gov. Alleged violations of the Americans with Disabilities Act are best handled through a proactive threefold approach: (1) Determine if you are subject to any of the provisions of the ADA, (2) obtain the services of experts on the ADA to evaluate the level of your compliance, and (3) work diligently to meet the requirements to which you are subject. Although these actions will not prevent you from being the target of frivolous lawsuits, you may use records of your actions as evidence of your intent to comply. This is often sufficient to persuade a mediator to pressure the complainant to either reduce the amount demanded or to withdraw the complaint entirely. The Department of Justice maintains an ADA Technical Assistance Program that provides help directly to interested parties. By using these services, a small business owner can be assured of having current information. The Technical Assistance Program provides specific advice for your business concerning how to comply with the pertinent requirements. This program is specifically aimed at the needs of hotels, motels, restaurants, and other affected small businesses. The program provides an information hotline, printed materials, and a speakers' bureau. It does not provide any inspection or affirmation services. Visit www.usdoj.gov/crt/ada/adahom1.htm for more information. Page 595 Managing risk from violations of OSHA standards and regulations is also best accomplished through proactive efforts. As with risks from EEOC and ADA enforcement, you should first ascertain the

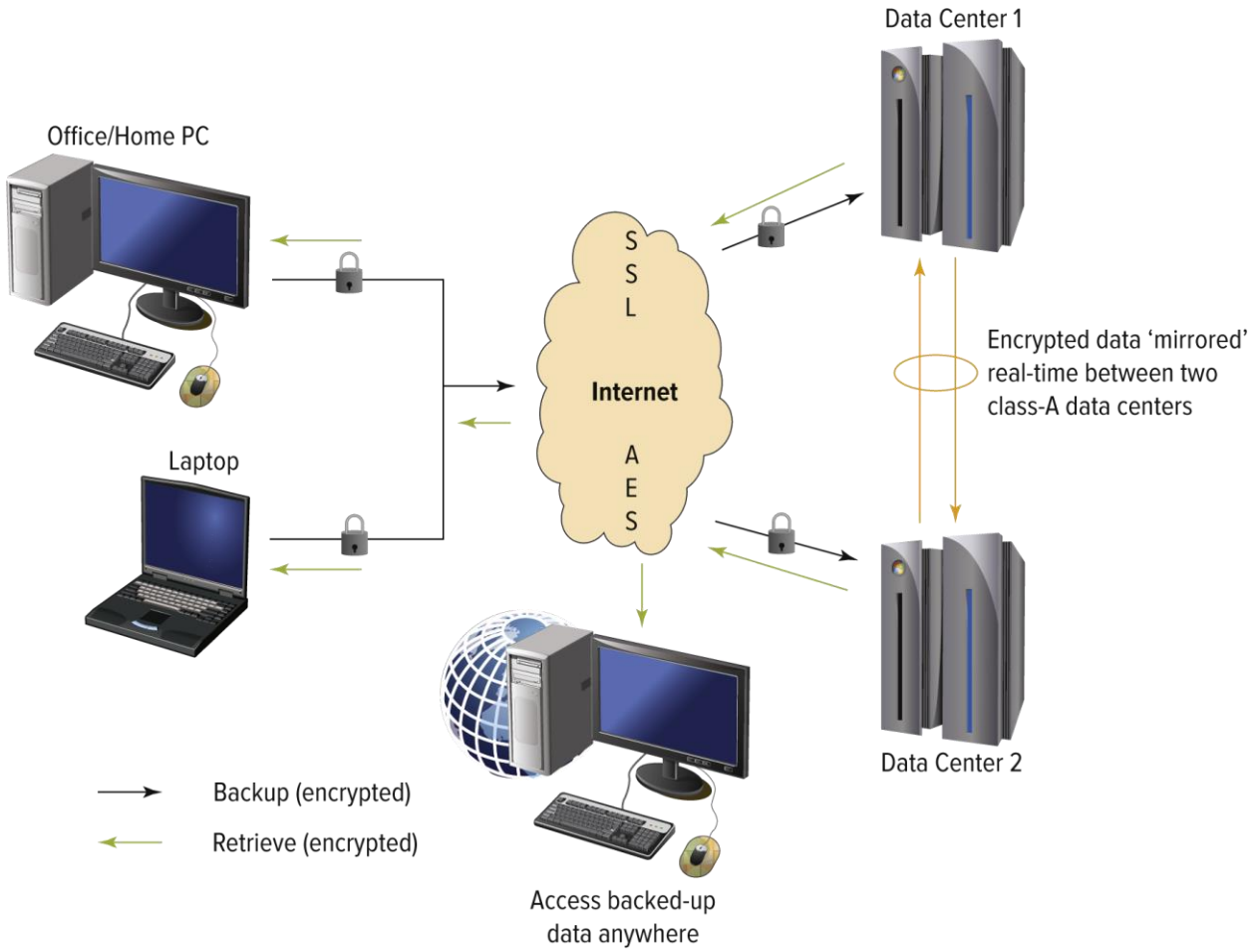
standards to which your business is subject. The Occupational Safety and Health Act covers all employees except those in mining, transportation, state and local governments, and self-employment. If your business is in any other industry, you are subject to the standards of OSHA for employee health and safety. Also remember that while you are self-employed, anyone you hire is not. Thus, while OSHA standards and regulations do not apply to you, they do apply to your employees. The best way to meet the basic laws of OSHA is to provide a place of employment that is free of recognized hazards and to: Maintain tools and equipment in good condition. Provide appropriate safety equipment and training in its proper use. Provide medical examinations. OSHA also offers free consultation services to employers who want help in identifying any deficiencies and in developing appropriate solutions. Consultations begin with a conference among the consultants and managers of the business where the scope of the consultation is set, and all parties agree on a set of working rules for the engagement. The conference is followed by an on-site inspection for hazards. The business's health program is also assessed. A final conference is held during which all findings are presented, along with suggested solutions to each identified problem. No report of any deficiency is made to OSHA for enforcement. However, if significant hazards are found, you can count on a follow-up inspection by OSHA after a reasonable time during which you must remedy the problems. A directory of OSHA-funded consultants can be obtained by requesting OSHA Publication No. 3047, Consultation Services for the Employer. You must also keep accurate records of all employee job-related illnesses and injuries. You must report within eight hours any accidents that result in a fatality or in the hospitalization of three or more employees. If your business has fewer than 10 employees or if your business is in one of the OSHA-defined "low-hazard" industries, you are exempt from the record-keeping requirements of the regulations. Low-hazard industries include automobile dealers, apparel and furniture stores, eating and drinking establishments, finance, insurance, real estate, and legal, educational, personal, and business services, as well as cultural and membership organizations. Using an Internal Audit as a Tool to Manage Risk A valuable process that can greatly help you with the issues of keeping risks at acceptable levels is completing an internal audit. You probably are somewhat familiar with public business's external audits, which are conducted by CPA firms and which must comply with a set of standards called generally accepted auditing standards (GAAS). An internal audit is similar in conduct; however, because it is strictly a management tool that is not provided to outsiders, it can be structured and conducted in any systematic manner you find acceptable. It is unlikely that you (or any owner of a small business) have the time, experience, or inclination to attempt to conduct an internal audit on your own. Rather, you should consider outsourcing the conduct of an audit to an expert in the process. Your own accountant may be able to conduct such an audit. But if not, he or she will be able to recommend a reputable and reliable firm that can do so at a reasonable

cost. A properly conducted, independent internal audit will give you: An evaluation of your overall level of business risk. An objective evaluation of your risk control structure. A systematic analysis of your business processes and controls. Information on irregularities detected during the audit process. A review of your firm's compliance with relevant regulations. A review of the existence and value of the assets of your business. A review of operational and financial performance. Recommendations for more effective and efficient use of resources. Assessments of how well your business is accomplishing your goals and objectives. Information about your employees' adherence to the organization's values and code of ethics. Page 596 As the owner of a small business, you must assume much of the task of conducting oversight of all aspects of your business. Activities that make up oversight include listening, asking questions, assessing and challenging answers. This is exactly what an effective internal audit will do for you. To be sure that the audit effectively meets your goals in having it conducted, you should: Meet (without the presence of other members of your management) with whomever is going to conduct the internal audit. Establish with the auditor that you and your board of directors (if you have a board) have the final authority to review and approve the audit plan. Write an engagement agreement with the auditor that clearly establishes the scope of work to be done. Provide sufficient authority to the auditor to ensure that he or she can accomplish the goals of the audit. Once the audit is completed, you must make positive steps to address any findings that indicate an unacceptable level of business risk.


Business Closed
Pursuant to Act 46 of 2003 for
Non-Payment of Sales Tax
This Business Is Prohibited From Further Operation
Notice Shall Only be Removed by Personnel of
Arkansas Department of Finance and Administration


How Frauds Are Detected
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
39.1%
16.5%
13.4%
5.6%
5.5%
5.5%
3.8%
3.8%
2.4%
Tip
Internal Audit
Management Review
Accident
Account Reconciliation
Other
Document Examination
External Audit
Notified by Police


UNCLE SMILEY SAYS
US
SMILE!
and be happy!


Data Center 1
Office/Home PC
S
S
L
Internet
A
E
S
Encrypted data 'mirrored' real-time between two class-A data centers
Laptop
Data Center 2
Backup (encrypted)
Retrieve (encrypted)
Access backed-up data anywhere

Insuring against Risks 16-4 Explain how insurance can be used to manage business risk. Although it is impossible for the owner of a small business to avoid all business risks, it is possible, through the use of insurance, to minimize the damage that such risks can cause. However, insurance can be expensive. Because of its expense, many small business owners choose too little insurance. When the inevitable occurs, an underinsured business

may well face bankruptcy and liquidation. The key to using insurance is to obtain the “right” amount of insurance at an affordable rate. Having too little insurance leaves the business open to unsupportable losses. Carrying too much insurance wastes money. Using Insurance to Manage Risks Insurance is a contract between two businesses in which one, the insurance company, for a fee, agrees to indemnify the other for specific losses that are likely to occur in the future. In other words, the insurance company contracts to pay money to your business if a specific “covered” event occurs that causes your business to suffer financial loss. Not all risks are insurable. Insurance provides a benefit by requiring a relatively small fee compared to the amount of loss that is possible. The insurance company makes a profit by collecting premiums for coverage from many businesses for the same set of risks. In effect, you and the insurance company are taking opposite gambles. You are betting that your business will be damaged or destroyed. The insurance company is betting that it won’t. The insurance company wins by collecting more from all the covered companies combined than it has to pay out to those few businesses that do, indeed, suffer damage. You win (if it can be considered a “win”) by having the insurance company pay when your business suffers a covered loss. Thus, the more likely an event is to occur, and the greater the potential amount that the insurance company must pay, the higher the price that you must pay for coverage. For this reason, insurance coverage is either not available or is excessively expensive for common events. Developing a Comprehensive Insurance Program Developing an appropriate insurance program for your business requires that you understand the risks to which your business is vulnerable. You must then know the amount of loss that your business could suffer as a result of the adverse events. Finally, you must obtain appropriate rates from reliable insurers, rates that are not too high for your business to pay but that do provide sufficient payouts if the insured event occurs. Identifying risks is the first task to be completed before a comprehensive insurance program can be developed for your business. Risks, as discussed, vary with the nature of your business. Risks that are common to most small businesses include fire, flood, storm, theft, business interruption, and loss of key personnel. Business-specific risks include product liability claims for manufacturers, malpractice claims for dentists and physicians, and errors and omissions claims for lawyers and accountants. Page 597 Determining which risks are to be covered is the next step. Not all identifiable risks can be or should be covered by insurance. The risk of events that are certain to occur cannot be insured at any price. Risks of events that are highly likely to occur but that have indeterminable payouts can be insured, but only at a very high price. Extremely unlikely events (being struck by a meteorite, for example) can be insured, but why would anyone do so? The Thoughtful Entrepreneur Box below discusses this issue in more detail. Events that should be insured are those that are likely, and the economic cost of which would create a severe burden on the finances of the business. Such events include natural disasters, liability to others, and the death or

disability of key employees. Page 598 Coverages required by law exist to provide social protection from harm caused to employees, customers, and uninvolved individuals. The most common mandatory insurance coverages are liability for damages caused by vehicle accidents and illness and injury caused by employment. Most businesses are also required to pay for unemployment insurance for employees to help defray the personal cost of having one's employment terminated. Vehicle liability insurance is mandated by the legislatures of all the states and territories of the United States. Minimum amounts of coverage are specified for property damage caused by the vehicle and for injury suffered by anyone other than the driver of the vehicle. Workers' compensation insurance is mandatory in some states. In others, it is discretionary. In all states, the workers' compensation laws provide fixed monetary awards to employees who are injured or disabled on the job. Workers' compensation is enforced through administrative procedures which preclude employees suing their employers. Federal statutes are limited to workers who are employed in some interstate commerce. THE THOUGHTFUL ENTREPRENEUR What Risks Can Be Insured? Not all business risks can be covered by insurance at a reasonable cost. Insurance companies, just like you, are in business to make profits. An insurance company must charge competitive prices to be able to sell policies. At the same time, the insurance company must charge enough to be able to pay legitimate claims of its policyholders. To be able to balance these conflicting needs, an insurance company must be able to accurately predict the amount of payments that will be made to settle claims for insurable events. The amount that an insurance company must pay out in claims is a function of (1) the frequency with which an event occurs, (2) the amount that must be paid according to the terms of the contract, and (3) the number of policies that have been issued. The risk must be calculable: An insurance company estimates the amount of potential claims payments by performing statistical analyses of the number and frequency of the occurrence of the event for which the insurance is being provided. For example, the probability of an individual business being flooded can be calculated from information concerning its location relative to sources and frequencies of floods. Although a specific flood may not be predictable, the number of businesses that will encounter floods in any one year can be predicted with reasonable statistical confidence, which allows an insurance company to determine the appropriate price for a flood policy. The value of any loss must be measurable in dollars: Insurance companies contract to pay only specific amounts of money for specific types and amounts of losses. In order to determine the amount that will be paid, it must be possible for the loss to be stated in a dollar amount. Thus, an insurance company will insure you for physical damage from fire. It will not insure you for the loss of your beautiful view, should the fire burn your neighbor's property across the road. The policyholder must have an insurable financial interest: Insurance companies will not insure losses for individuals who do not suffer a financial loss from what is being insured. This

requirement acts to prevent fraud by persons deliberately "creating" the event in order to profit from it. In the same vein, an insurance company will not pay more than the actual amount of the loss, regardless of the amount of the policy terms. The pool of potential policyholders must be of sufficient size: Insurance works because the insurance company diversifies its risk by insuring numerous businesses in widely separated locations. This ensures that no single disaster will result in the insurance company having to pay an excessive number of claims at any one time. Of course, this strategy occasionally fails. In August 2005 Hurricane Katrina became the most costly catastrophe on record. The extensive damage to a relatively large area has seriously tested the ability of several insurance companies to pay required claims and to remain in business. Unemployment insurance is collected by the IRS and state agencies as a percentage of tax on payroll. The amount collected varies among industries and among businesses within an industry. Industries and businesses that have frequent seasonal layoffs pay higher amounts of unemployment premiums than do those that have stable employment. Desired coverages beyond mandatory insurance include general liability, product liability, catastrophe, and various types of malpractice coverage. Liability insurance protects your business against claims from harm caused by inadvertent consequences of actions of the business or its employees. The list of potential causes of harm to customers, vendors, or others is nearly endless. Customers fall while on business premises. A careless worker can splatter paint on a stranger's automobile. Sparks from welding can start fires on others' property. A faulty valve can release noxious or even deadly fumes into the atmosphere. Your sewer can plug and cause flooding in your neighbor's place of business. Commercial liability insurance covers losses that are the result of such mishaps and accidents. Commercial liability insurance can be obtained, at a price for even the businesses with the highest risk of harm to customers. The Thoughtful Entrepreneur Box illustrates the problems of insuring one of the riskiest consumer businesses, that of carnivals. Product liability insurance covers losses resulting from claims made by persons who use the products of your business. The risk of customers and others being harmed by your product is largely a function of (1) the nature of your product and (2) the intended users. Those products that have historically given rise to the largest claims for injury and illness are (1) transportation equipment, such as automobiles, airplanes, and bicycles; (2) health products, such as pharmaceuticals and body implants; and (3) appliances, such as toasters, vacuum cleaners, and kitchen ranges. However, examples of huge cash settlements for product liability exist for a multitude of products that would seem to be harmless by nature. Examples of such cases include insulating foam that was discovered to emit formaldehyde, asbestos-containing products that are believed to be carcinogenic, and a multitude of toys that are alleged to cause choking and other hazards to children. Errors and omissions insurance and malpractice insurance are examples of special types of liability insurance that cover losses from harm

caused during the performance of your profession. Errors and omissions insurance covers claims made by clients of attorneys, accountants, and other consultants. Malpractice insurance covers claims made by patients of physicians, dentists, nurses, and other medical practitioners. The primary value of this type of insurance is the access to highly competent specialist lawyers that is provided by the insurance company. The insurance companies employ cadres of lawyers to represent professionals who are accused of incompetence or wrongdoing. These lawyers are usually successful in negotiating reasonable settlements with clients who have been harmed. Should a settlement be impossible, the same lawyers will vigorously defend the accused professional in the subsequent court action. Of course, in the event that the professional is held responsible for a client loss, the insurance company will pay the claim, up to the limit of the insurance contract. You, as an individual owner or manager of a small business, can obtain a general liability insurance, which is often called an umbrella policy, or a success protector policy. General liability policies exist to pay losses that are not covered by other liability insurance. It is a sad fact of our current legal climate that actual culpability is irrelevant to many damage claims. If you are successful in your business, your success makes you a target for lawsuits because you are considered to be able to pay a judgment, either through your personal wealth or through seizure of your business property. Claims against general liability policies are usually a result of such litigation. Page 599 Insuring the Property of the Business Commercial property insurance covers losses to the business property from causes such as fire, storm, vandalism, and theft. Other property insurance exists to pay losses resulting from floods or earthquakes. The cost of property insurance is determined largely by (1) the property's insurable value, (2) the amount of deductible loss, (3) the amount of co-insurance required, and (4) the loss limits of the policy. All the value of a property does not have insurable value. For example, as a general rule the value of land, excavation, and basement is not insurable. This is because even when a disaster occurs, the land remains. Only a very few types of disasters, such as earthquake or landslide, can change the nature and topography of land. Additionally, some property has value that cannot be stated in dollar amounts. The value of the historical significance of a building often cannot be determined. For example, in Clarksville, Tennessee, the Hachland Hall Bed and Breakfast has a log cabin that was the home of President Andrew Jackson during the time that he was building the famous Hermitage. Were this cabin to burn to the ground, its replacement cost for logs, timber, and finish lumber could be no more than a few tens of thousands of dollars. However, no matter how carefully rebuilt, the replacement would be a replica, not the actual cabin. As such, it might be interesting, but it would not have the special character that now makes it unique. Placing a dollar amount on the historical value of this cabin is highly problematical. A deductible is an amount of loss that is specifically excluded by the insurance contract. It is common for vehicle policies to specify that in the

event of loss, the insurance will pay the amount of the loss, less a deductible of $250 to $1,000. Policies on buildings and equipment usually have similar deductibles ranging from $1,000 to $10,000 or more. As a general rule, the higher the deductible, the lower the policy premium payments will be. Co-insurance is a contract requirement that works to prevent property owners from deliberately under-insuring. Co-insurance requires that the owner carry insurance in an amount equal to a stated minimum percentage of the market value of the property, usually 80 percent. If the owner allows insurance coverage to fall below this amount, then the amount that the insurance company will pay in the event of loss is reduced by an amount proportional to the amount of underinsurance. The reason for such arcane provisions is to increase the amount of premium that the insurance company collects relative to the risk that the insurance company is taking by insuring the property. The higher the value a property has, the greater the likely payout an insurance company will have to make in the event of loss. Consider that property losses are highly correlated with the value of the property. At one extreme, the loss can never exceed the market value of the property. At the other extreme, loss cannot be less than zero. In between the two extremes, losses are often a function of the value of the property. For example, suppose two businesses each experienced a fire that destroyed the roof of a warehouse. A 43,000-square-foot warehouse worth $3.5 million has a much more expensive roof than does a 10,000-square-foot warehouse that is worth less than $750,000. Similarly, losing your 1,600-square-foot retail space will be a much greater dollar loss if the store is located on Rodeo Drive in Beverly Hills, California, than if it is located on Main Street in Beckwourth, California. Business interruption insurance provides funds to pay the ordinary operating expenses of your business should it be forced to close temporarily because of an insured event. Although business interruption insurance can be purchased as a stand-alone policy, it is usually acquired as a provision of commercial property insurance. • When disasters hit, like this fire, most small businesses depend on insurance to make up for the loss. What factors should you consider when seeking insurance? rfoxfoto/123RF Crime insurance offers protection against losses from crimes committed against your business. It is an unfortunate fact that the greatest number of crimes of which you are likely to be victim are committed by trusted employees. Page 600 Theft insurance is normally included in insurance on physical assets. However, the greatest threat of loss because of employee dishonesty is the misappropriation of cash, as was discussed earlier. Cash cannot be insured. An approach to obtaining insurance against employee theft of money is to require all employees with access to money or to accounting for money to be bonded. Fidelity bonds, also called dishonesty bonds, repay employers for losses caused by dishonest or negligent employees. Fidelity bonds cover losses from employee fraud, theft, forgery, and embezzlement. Unlike surety bonds, fidelity bonds are purchased only for the employer’s benefit. If you have any employee who handles large amounts of cash or other valuable

assets, you should consider bonding that person. Some businesses, including insurance companies, securities brokers, real estate brokers, and businesses that hold escrowed cash, are required by law to carry fidelity bonds. All employees who have direct access to a company's cash, securities, and accounting records, or who handle investment or retirement funds, should be bonded. Bonds are available to cover individual specific key employees, or as blanket bonds that cover all employees. When obtaining fidelity bonds, you should consider the following: The scope of coverage. All exclusions. Types of employee dishonesty not covered (e.g., salary, benefit, or computer fraud). Coverage for employee actions off-premises. Credit insurance covers abnormal losses from credit customers not paying their bills. Abnormal losses are carefully defined within the insurance contract. Typical covered events include customers who cease business because of bankruptcy or business interruptions caused by fire, storm, wind, floods, and earthquakes. Less common and more expensive coverage exists that will pay for losses that arise from general economic conditions such as recession, war, or trade embargos. Credit insurance can be obtained that covers all credit accounts or that covers only specific accounts. General credit insurance is expensive, and it is common to choose to cover only very large accounts, the loss of which would threaten survival of the business. All credit insurance requires the merchant to provide co-insurance in the amount of 10 to 20 percent of the credit loss. The co-insurance provision works to prevent both frivolous claims and to provide a disincentive to companies to issue credit indiscriminately. Credit insurance companies provide mandatory collection services. The insured business is required to promptly report all past due accounts. When an account is determined to be delinquent, usually after 90 days of no payment, then the account must be assigned to the insurance company which will make vigorous efforts to collect. Credit insurance is available only for manufacturers and wholesalers. At this time no insurance company will write coverage for retailers who offer credit to customers. Retailers who provide credit are protected in two ways. First, those few retailers who offer credit directly to customers usually have a large number of relatively small accounts receivable. This provides a greater diversification of the risk of loss than is available to wholesalers who usually have a relatively small number of large value receivables. Second, most retailers today provide credit only through credit cards, including Mastercard, Visa, Discover, and American Express. Credit card companies perform credit checks before issuing cards, and thus limit the risk of nonpayment. Additionally, the credit card companies have developed rules which include checking cards for customer signatures, requiring a government-issued picture ID, and obtaining a transaction authorization prior to providing the credit sale. Retailers who follow the rules are not liable for any future nonpayment by the credit card holder. THE THOUGHTFUL ENTREPRENEUR Bring in the Clowns Imagine a fair without a midway. Can a fair even be a fair without a carousel, a roller coaster, or a Ferris wheel? Carnivals are hugely popular

entertainments. Over 500 million people attend amusement parks, fairs, and carnivals in the United States each year (which is quite impressive, given that the entire population of the nation is only 300 million). As you might expect, carnivals experience numerous accidents each year, ranging in severity from bruises and abrasions to permanent maiming and death. According to the U.S. Consumer Product Safety Commission (CPSC),24 approximately 11,000 people are injured on amusement rides each year. Of these, about 5 die. There are approximately 500 carnivals that travel the United States each year, ranging in size from 1 to over 100 portable amusement rides. The vast majority of carnivals are small family-owned businesses with second- and third-generation members involved in management and operation.25 If your carnival is large enough and you expect to have about 1 million riders in a year, then you should expect to experience approximately 20 to 25 injuries, based on CPSC statistics. If the people injured are representative of the national experience, all of them will be younger than 16. Not one will have an injury severe enough to require more than outpatient treatment. However, there is a small, but measurable risk that you will be among the unfortunate carnival operators who have patrons seriously injured to the point of maiming or death. As the owner of a carnival, what insurance should you carry to cover the injuries of customers on your rides? Insurance to cover the potential medical expenses for twenty-some minor injuries would be prohibitively expensive. It would, on the other hand, be quite risky for your business to carry no insurance at all. A reasonable strategy is to obtain insurance that will cover only serious injury and death. Your carnival will then absorb the cost of treating minor injuries, the number of which can be reduced by a safety program that prevents customer horseplay, requires operator training, and enforces regular rigid safety inspection of the rides. Taking such measures reduces not only the probability of serious injury but also the cost of accident insurance. Personnel insurance is available to protect both you and your employees from specific risks. Personnel coverages include key person insurance, life, disability, and medical coverage insurance. Key person insurance protects you in the event that a key employee dies or is disabled and cannot work. Page 601 Life insurance is the most common kind of coverage on key persons. Usually key person insurance names you, as the owner, or your business as the beneficiary of the policy. Life insurance also is often provided to employees to provide security for their families. Life insurance provided by you, the employer, is usually term insurance. Term insurance is a form of insurance that does not accumulate any value over the contract term. Rather, only specific events, including disability, dismemberment, and death, are insured events. Term insurance is very inexpensive for healthy young people. The premiums increase with age, and with specified risk factors such as obesity, heart problems, and a history of driving while intoxicated. Disability insurance is usually provided as part of life insurance, although it can be obtained as either a stand-alone policy or as part of medical coverage. You as the owner of

a small business should carefully consider obtaining disability coverage not only for key persons but also for yourself. Statistics provided by AARP (formerly the American Association of Retired Persons) show that between the ages of 22 and 65 there is a greater than 25 percent probability that you will be disabled for a period of 12 months or more.26 Statistics provided by the Social Security Administration indicate that the greatest probability of becoming disabled for this period of time occurs between ages 50 and 65.27 The probability of shorter periods of disability is, of course, much higher. Given the high probability of temporary disability and the devastating effects it can have upon a small business, it is becoming ever more common for disability coverage to be included in business insurance plans. Page 602 Disability insurance can take several forms. The most common disability coverage provides the insured person with funds to replace income lost because of the inability to work. While this coverage is important to the person who becomes disabled, it provides no direct benefit to your business. Some insurance companies now offer disability coverage that provides direct benefits to small businesses and to owners of small businesses. The most common of such disability coverage is buyout insurance which provides funds to purchase the ownership position of an owner who is disabled or deceased. Less common, but of similar value for small business owners, is disability coverage that will pay specific fixed costs of the business, such as rent, salaries, and utilities, in the event that the owner or other named key person becomes disabled. Even less common is disability coverage that will pay specific dollar amounts to the business to replace lost revenue caused by the disability of a key person. Medical coverage is the most highly desired form of insurance for most employees. Medical coverage is quite expensive, and the cost has been increasing rapidly in recent years. There are many reasons, however, that you, as the owner of a small business, might wish to provide such coverage for your employees. First, receiving medical coverage is a strong retention incentive for employees. Second, if you provide medical insurance for all employees, you can obtain reduced rates and can include yourself and your family. Third, the least expensive way to obtain key person insurance is as a part of a comprehensive medical insurance plan that covers all employees. Of more immediate concern, however, are the provisions of the Patient Protection and Affordable Care Act (PPACA), and the Health Care and Education Reconciliation Act, which together are often called, “Obamacare.” The provisions of these acts require that businesses with 50 or more full-time equivalent employees pay a substantial part of the cost of medical insurance. For businesses with 25 or fewer full-time equivalent employees, there are tax credits to help offset the cost of providing health insurance. Today, more than 10 years after its passage, the entire PPACA remains highly controversial. Numerous unsuccessful attempts have been made to repeal the law, while at the same time, many politicians have campaigned to extend its scope. What the ultimate costs and benefits will be are yet to be determined. Regardless, the act

and subsequent regulations are highly complex and generally not well understood. Owners of small businesses are well advised to seek expert assistance in this area.

Sharing Risk 16-5 Describe techniques for sharing risk with other businesses and organizations. One very effective method to reduce and to control business risk is to share that risk with other entities. As discussed previously, one way to share risk is through insurance programs that, in effect, diversify risk across industries, businesses, and geographic areas. Additionally, risk can be directly shared without the intermediary of an insurance company, by forming joint ventures, by joining industry groups, and by obtaining government grants and guarantees. Joint Ventures Joint ventures are partnerships through which two or more businesses combine to undertake a specific economic activity. Each business involved in a joint venture keeps its own identity and conducts its own business separately from that of the other partners. The businesses are partners only for the activities specified in the joint venture contract. Joint ventures are most usually formed and taxed as partnerships. This allows for disproportionate allocation of revenues and expenses among the partner businesses. The ability to assign tax items to the partner for which they are most advantageous eases the problems of dissimilar businesses forming a partnership. A relatively large, profitable partner can be assigned the deductible costs of the joint venture, while revenues are simultaneously assigned to the smaller, less profitable (or even unprofitable) partner who will pay taxes at a lower rate. Another advantage of joint ventures is that each partner can lose no more than its investment in the venture. The joint venture is a separate entity from any of the partners that own it. Thus, if the joint venture fails, only the resources of the joint venture are lost. The partner companies can continue in their individual businesses. Page 603 Industry Groups for Insurance Coverage One of the primary reasons that there is at least one organized group for every conceivable industry is that joining in groups provides benefits of scale to members. The most common benefit is low-cost group insurance. The cost of insurance, as discussed, is partly a function of the risk that the insurance provider assumes. Insurance companies diversify risk by insuring large numbers of similar businesses. It is obvious that the International Sign Association can provide a much larger pool of people to be insured than can any single sign shop member. Because of the larger pool of potential insured people and because of its greater bargaining power, the ISA can obtain much lower insurance rates for its members than the members can obtain individually. Government Funding of Risky Ventures The final source for sharing risk is governments. Townships up to the federal government have programs to encourage economic activity. Governments do not have the profit-making requirements of businesses, but they do have the power to extract money from citizens. As a result, risk for a government is very different from risk for private business. Governments often subsidize

very risky ventures that private companies would otherwise never attempt. One example of government subsidizing risky ventures can be seen in the building of sports arenas, convention centers, and convention hotels. Cities across the nation have imposed taxes on citizens and tourists to subsidize the building of such facilities. St. Louis has three such publicly funded arenas: one for the Cardinals baseball team, one previously for the Rams football team, and a half-million-square-foot convention center. Houston recently demolished an old facility and built a new one for the Houston Oilers football team. The city of San Antonio, Texas, and Bexar County recently enacted one of the nation's highest taxes on hotel rooms and rental cars to finance a new arena for the Spurs basketball team, despite having the largely unused Alamodome. Small businesses can also obtain their share of government subsidies through direct contracting and grants. Opportunities exist for small businesses to obtain government funding for recycling of waste materials, for research and development of products for health, security, and defense, and for providing services directly to government entities. In Conclusion Although business risk cannot be eliminated, it can be controlled. Management techniques including security devices and internal controls can reduce the risk of misappropriation of business assets. Those risks that cannot be controlled can be insured. Insurance works to reduce the amount of loss that any individual business experiences because of natural events, dishonesty, or negligence. Because the environment in which business operates is constantly changing, you, as the owner and manager of a small business, must constantly reassess your risk controls, your exposure to disaster, and your insurance coverage. Ben Franklin said long ago, "A penny saved is a penny earned," and that adage is truly important for small businesses. Money saved means more flexibility and more profit. The point of spending time on risk and insurance and protecting yourself and your business is to help you identify the ways to minimize your losses. Often, thinking about the potential sources of risk and loss ahead of time makes it possible for you to take action to minimize the risk or handle the loss should it come. The whole concept of insuring against risk works best when you can think objectively about the potential risk, loss, and cost to your firm. Only then can you be sure that you are spending your insurance dollars wisely. Despite all the talk about financial loss, it is important to note the human and emotional cost of loss. Whether through injury or criminal action, loss focuses our attention and can make us sad, angry, guilty, or a combination of the three. When it causes harm to employees or customers, it can derail a business and its owner. For all these reasons, taking the time to protect your business, its assets, and people always makes sense.

CHAPTER SUMMARY 16-1 Explain the meaning and nature of business risk. Business risk comes from many sources, including financial risk from capital structure, economic risks

from business decisions, and the environment. Business risk is the probability that the future economic state of the business will be worse than is projected. 16-2 Describe the specific types of risks associated with different aspects of business operations. Economic risks arise from events related to the property of the business, to the personnel of the business, and to the customers, vendors, and visitors to the business. Violation of government regulations has become a significant business risk due to the many laws, rules, and regulations of the ADA, OSHA, the EEOC, and various tax agencies. Businesses are usually held liable for injuries suffered on business property, regardless of the cause. 16-3 Describe techniques to manage risks to stay within your level of risk tolerance. The loss from various events can be reduced by making specific plans and arrangements to deal with them, should they occur. Disaster plans can reduce losses by reducing the time that business operations are interrupted when the event occurs. Following building codes, locating away from flood plains, and keeping property clear of flammables can reduce loss from natural events. Risk to computers and data can be controlled by protection software, backups, and password use. The best control for risks from personnel is to hire qualified people of high integrity. Conducting an internal audit can provide an independent analysis of the levels and types of business risk. 16-4 Explain how insurance can be used to manage business risk. Keeping the right types and levels of insurance can minimize a business's loss from adverse events. You should not try to insure against all risks, rather only those that have economic consequences great enough to threaten the survival of your business. Some insurance coverages are required by law. 16-5 Describe techniques for sharing risk with other businesses and organizations. Risk may be reduced and insurance made affordable by joining with other similar businesses. The risky activity can be separated from the main part of your business through joint ventures and placing the risky activity into a separate legal entity. Industry groups can obtain lower insurance rates than can a single business. Government agencies can provide protection from risk by limiting the potential loss and by subsidizing risky ventures.

KEY TERMS employee theft regulation of the workplace Equal Employment Opportunity Commission (EEOC) Occupational Safety and Health Administration (OSHA) protected classes Age Discrimination in Employment Act (ADEA) Rehabilitation Act of 1973 Americans with Disabilities Act (ADA) of 1990 Civil Rights Act of 1991 key employees separation of duties internal control tax codes Page 605 insurance coverages insurable value deductible co-insurance fidelity bonds surety bonds buyout insurance joint venture

DISCUSSION QUESTIONS Discuss the types of risk encountered by small businesses. Are these risks different in any way from risks facing big business? What are the risks to small businesses caused by personnel issues? How are the risks from personnel affected by government business regulations? How does disaster planning help a small business cope with risk? The text discusses methods to protect against weather. What might a business do to protect itself against an earthquake? Which is easier to steal, money from an employer's bank account or secret business processes? Why? What types of insurance should a small business have? Give your reasons for maintaining each type of coverage. Suppose you are in the business of making ladders. A customer places a board plank between two of your ladders as a scaffold. One of the ladders fails, causing your customer to fall and break a leg. Are you responsible for your customer's losses? How can you protect yourself from lawsuits in such cases? You are considering offering credit to good customers to increase sales. What things should you consider to limit your risks if you do? One of your partners has special skills that would be very difficult to replace. His great joy in life is single-track bicycle racing. How can you protect yourself from the probability that he will be injured and unable to work?

EXPERIENTIAL EXERCISES Identify a business you would like to own. Make a list of the risks that are specific to that business. Contact an insurance broker to find out what coverages are available and what they would cost. Make a report to your class of your findings. Identify a business you would like to own. Go to the OSHA website and find out what rules and regulations apply to this business. Create a chart of hazards of this business and the applicable OSHA rules. Make a report to your class of your findings. Suppose you are going to open a consulting business. You are going to finish half of your garage to use as an office. Go to the ADA site and determine what accessibility requirements you must meet. Make a report to your class of your findings. Identify a specific location (street address) where you would like to operate a business. Visit your city's planning and zoning office (or its website, if it has one) and determine if this site is in a flood plain. Make a copy of the city's map of flood plains. Then make a report to your class of your findings. Identify a business you want to own. Use the resources of your library and the Internet to identify what insurance you are legally required to carry. Contact an insurance broker to determine how and for how much you can obtain the required coverage. Make a report to your class of your findings.

MINI-CASE RISKY BUSINESS Vicky Volare fell in love with motor scooters on her vacation trip to Aruba. “They’re a blast!,” Vicky said. “They are convenient, safe, inexpensive, and fun to ride.” Now she is planning to buy 30 Vespa Scooters to provide scooter rental in Vail, Colorado. Vicky will need four employees, in addition to her own services. She has completed a business plan, except for determining what types and amounts of insurance coverage she should have. As soon as she completes the insurance planning, she can complete the financial section of her business plan. Vicky will invest $50,000 of her own funds and is borrowing $230,000. $180,000 of the loan will be secured with the 30 scooters. The other $50,000 is a personal note to her from her bank. She hopes to start her business within 90 days, to catch the beginning of the summer. CASE DISCUSSION QUESTIONS What financial risks is Vicky assuming? What are the risks specific to renting motor scooters? What are the risks specific to motor scooters as physical assets? What risks will Vicky face because she is hiring four people? What regulatory risks will Vicky face in operating a vehicle rental service in the state of Colorado? What insurance coverage will Colorado require Vicky to have? What insurance must Vicky have for her employees? How should Vicky structure her business to minimize the potential loss she can suffer if a customer or bystander is injured or killed by one of her scooters?